

REPORT  
OF THE  
COMMISSIONERS  
OF  
FOREST PARK,  
*St. Louis.*  
1875.

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SAINT LOUIS, Mo.:  
PRINTED BY JNO. J. DALY & CO., 213 NORTH THIRD STREET.  
1876.



1875.

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BOARD OF COMMISSIONERS.

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CHAUNCEY F. SHULTZ.

JOHN O'F. FARRAR.

HIRAM W. LEFFINGWELL.

PETER G. GERHART.

ANDREW MCKINLEY.

ANSYL PHILLIPS.

JOHN J. FITZWILLIAM.

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ANDREW MCKINLEY,  
*President.*

ANSYL PHILLIPS,  
*Vice President.*

CHAS. BLAND SMITH,  
*Secretary.*



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REFERENCES.

- 1. Depot of St. L., E. & A. N. R.R.
- 2. Park Headquarters
- 3. Cottage
- 4. Colonial Statue of Horse
- 5. Shelter
- 6. Fountain
- 7. Pump-House
- 8. The Lodge
- 9 & 10. Music Pavilions
- 11. Covered Rustic Bridge
- 12. Cascade
- 13. Site for Castle
- 14. Site for Observatory
- 15. Police Stable
- 16. Propagating Houses
- 17. Rustic Shelter
- 18. Iron Viaduct
- 19. Bates Monument

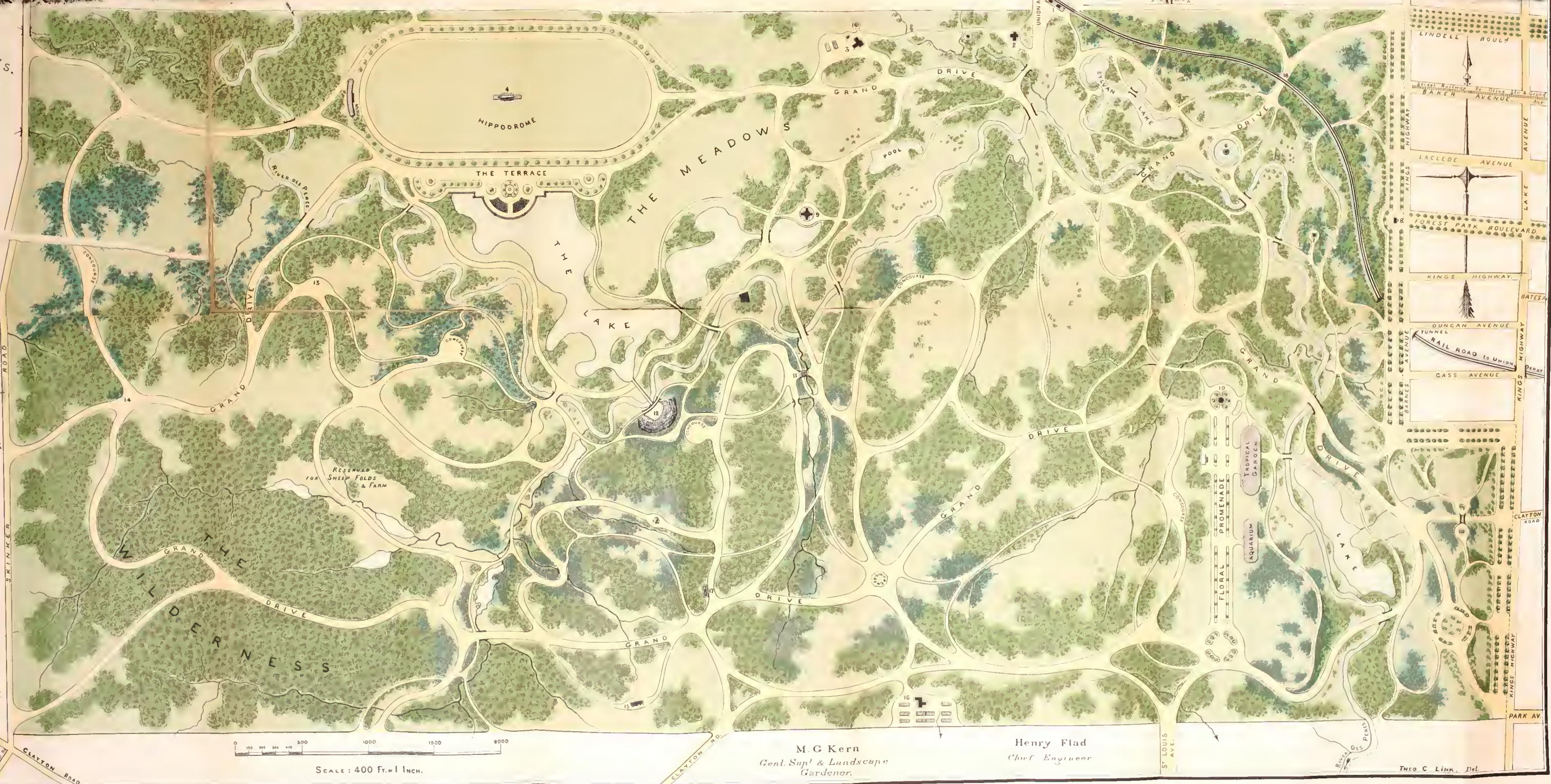
BOARD OF COMMISSIONERS 1875-1876.

ANDREW MCKINLEY, President  
ANSYL PHILLIPS, Vice President  
CHAS. BLAND SMITH, Secretary

DIRECTORS.

CHAUNCEY F. SHULTZ,  
JOHN O'FARRAR,  
PETER G. GERHART,  
HIRSH W. LEFFINGWELL,  
ANDREW MCKINLEY,  
ANSYL PHILLIPS,  
JOHN J. FITZWILLIAM

TOTAL AREA OF PARK 1374 ACRES



M. G. Kern  
Genl. Supt. & Landscape Gardener.  
Henry Flad  
Chief Engineer

THEO. C. LINK, Del.





REPORT  
OF THE  
Commissioners of Forest Park.

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OFFICE OF THE BOARD OF COMMISSIONERS OF FOREST PARK,  
ST. LOUIS, *January 1st, 1876.*

*To the Honorable, the Judges of the  
County Court of St. Louis County:*

FOREST PARK is in the first year of its existence, and by a provision of the Act for its establishment, the Board of Commissioners is required "to report all its proceedings to the County Court at the first meeting of said Court in January and July of each year."

The rapid growth of St. Louis has aroused the dormant energy of our people, and the metropolitan taste and ambition of St. Louis, illustrated by her great bridge, tunnel, fair grounds, custom house, chamber of commerce, and palatial stores and residences, have brought into existence, as its most charming feature, a system of Parks, unequalled by any city in the new world.

In a few months, when the great number to whom Forest Park is known only by name, shall avail themselves of the means which will be then afforded to explore this novel region, great will be their gratification and surprise to behold its superb scenery, in a forest whose natural beauty had been marred by the rude hand of the woodman. Nature had been lavish in her gifts; but only two antiquated dwellings with some dilapidated out-houses, and the huts of miners of the poorer class, were to be found in its vast extent. Three neglected farms, and two open, but abandoned, fields disfigured, rather than adorned, the surrounding forest.

It was indeed strange that this large tract of land should have been left in a state of nature, covered by native grasses and trees in wonderful profusion, and so admirably adapted to the wants of the people of a great city. With all its natural and undisclosed beauties and adaptability for park uses, its centrality and accessibility, yet the land was esteemed to be of little value. The extraordinary attractions of the Park, even in its present incomplete state, will well reward the visitor. Its dense woods, its majestic trees, wide spreading lawns, and its far reaching outlooks, offer an enticing spectacle to all who enjoy the beauties presented by the grace of its natural surfaces.

The illustrations furnished in this report, show some views which exhibit fairly the general characteristic features of the Park. They might have been multiplied indefinitely, but will, perhaps, suffice.

The importance of the Park purchase in providing a place of resort, of rare interest and beauty, for the enjoyment and recreation of our people, can scarcely be over-estimated; but its acquisition and improvement would have been justified from sanitary and economical considerations alone.

Its surface, as seen by the accompanying topographical map, are extremely diversified and often broken by abrupt declivities, at the feet of which winds the River des Pères, or by the rugged and narrow ravines which furnish drainage to the river. It is true that these features present some of the most picturesque scenes of Forest Park, but are poorly adapted to city uses and improvements; and when the city shall extend to and around the Park, the cost of bringing up its grades, of burrowing through its hills and of sewerage its turbulent river and tributary ravines, would have been, but for the appropriation of these lands to park uses, greater than the cost of the purchase.

The low lands would, doubtless, sooner or later, have been devoted to large dairy establishments, pig stys, factories for glue, soap and other offensive things. Indeed, some of these before the Park was acquired, had invaded the property; and experience in other localities of our city, serves to show how rapidly nuisances

multiply when they obtain a foothold on the borders of a stream, and how speedily and thoroughly they destroy the value and uses of all surrounding and otherwise desirable property. Before the establishment of Forest Park, the best improvements were advancing westwardly in that direction, and the existence of the nuisances above-mentioned, would have arrested all improvements and have reduced, to the lowest standard of value, this now promising and splendid suburb. The low lands of the Park, recently so repulsive, are now adorned by bright and extensive lakes, and by midsummer, will be embellished by numerous fountains. This transformation will also dissipate the malaria which lurked amid the shaded recesses of the low and overflowed lands of the Park.

An additional and more important inducement for the purchase will appear when a site for another grand reservoir shall be needed. This will certainly occur within the next ten years, and a most eligible location will be found in the elevated portion of the Park. It is immediately west of the centre of the city, on an elevation of one hundred and eighty feet above the city directrix. It can be reached by connections with the mains on Grand avenue, and its distance from the Water Tower is not much greater than is the reservoir on Compton Hill. Much has been said of bringing water to the city from the Meramec river: should this be done, no other site for a reservoir will equal this in its accessibility, as a point of supply and distribution. It has been paid for and secured!

FOREST PARK will prove attractive at all seasons, spring will give it, with its luxuriant, indigenous grasses and the varied verdure of its native and cultivated trees, an exquisite beauty and freshness. In the leafy month, the light and shadow of its open lawns, interspersed with groups and individual trees, will be presented in striking contrast with the dark recesses of the wilderness, where it will be a study to preserve all of the impressive features of the primeval forest.

The changing leaves of autumn, found in such perfection in our country, here offer the greatest contrast, and splendid variety and combination of colors. In winter, when snow and sleet cover the earth and drape the trees in the clear and bright morning sun, a

scene fairy-like and indescribable will be disclosed. But in the summer afternoons, and early mornings, the Park will prove the most delightful. The early spring, the protracted and ardent heat of the summer months, and the glories of our Indian summer, lingering almost until merry Christmas, renders, in this climate, a *forest* Park attractive and enjoyable for quite eight months in the year. When opened to the public next spring, it will be the rendezvous of our people in a gay throng of carriages, and of visitors by the lines of quick transit, then prepared for their accommodation.

The Board, immediately after its organization, addressed itself to the means of attaining the best approaches to the Park and has not ceased to give that matter its most earnest attention.

A bill, to authorize your Honorable Body to provide suitable Boulevards and Avenues in connection with Forest Park, O'Fallon Park and Carondelet Park, was prepared and sent to the State Legislature. It passed and was approved on March 20th, 1875.

This Act, in section 1, declares: that "on the petition of the Board of Commissioners of Forest Park, O'Fallon Park or Carondelet Park, and a majority in interest of the owners of property, fronting upon the contemplated Boulevard or Avenue, the County Court of St. Louis County may, at its discretion, open and establish all such Boulevards and Avenues, as it may deem and determine to be necessary or proper and useful as approaches for any of said Parks."

Under this act a petition to establish Lindell Boulevard, as provided for in the same, was submitted to your Honorable Body. The proposed Boulevard is to be one hundred and ninety-two feet nine inches wide, extending from Cabanné avenue to the north-eastern entrance of the Park, a distance of eight thousand three hundred and thirty-seven feet. The owners of the land, with rare liberality (with two or three exceptions), offer to dedicate so much as is to be embraced in widening the Boulevard, without compensation therefor.

The attention of the Court is respectfully requested to this subject, as this Boulevard, if opened, will prove the most desirable and elegant line of access to the Park from the centre of the city. If your Honorable Court should fail or refuse to take the necessary steps to open

this grand Boulevard, the Board fears, in the event of an extension of the city limits, there will be no means to accomplish a result so desirable to the County and the Park.

Under the act of the Legislature above mentioned, and known as the Boulevard Bill, certain avenues and boulevards have been petitioned for by the property holders and by this Board, as follows:

Forest Park Boulevard, extending from Grand Avenue to Forest Park, one hundred and fifty feet wide.

St. Louis Avenue, one hundred feet wide, from Arsenal street to the Park, on the south side thereof.

Union Avenue, extending from the St. Charles Rock Road, one hundred feet wide, to the Park on the north.

Park Avenue, from Lafayette Park to the south-east corner of Forest Park.

Your Honorable Court has taken some action in regard to these, and as no opposition has been made, and the proceedings are more or less advanced, it is probable that all of them will be speedily opened to the public. A petition is also in circulation among the property owners, to widen the King's Highway, from Tower Grove Park (fronting on Forest Park for about 6,000 feet) to the Natural Bridge Road, but no application has yet been made to widen the same. Should this be done, it will furnish an elegant line of connection between the several Parks.

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## HISTORY OF FOREST PARK.

Forest Park lies immediately west of the centre of the city, in the direct line of its greatest growth and progress, and from it are to be seen many of the most elegant mansions of our wealthiest citizens.

An attempt was made to establish a park, with the same name and with the same boundaries, by an act of the Legislature, approved March 25th, 1872. Some of the owners of property, now within the limits of the Park, resisted the act, and upon appeal to the Supreme Court of the State, it was declared to be unconstitutional. A new bill, avoiding the odious and unconstitutional features of the former, was prepared and submitted to the delegation of the city and county at the session of the Legislature in January, 1874. Many objections were made to the bill, and it was modified so as to make its provisions conform to the views of the delegation.

The sum asked for the purchase of the land and to inaugurate its improvement was large, in the first and most alarming year of the still continuing financial panic, and was opposed by strong and influential combinations: but passed the Senate by a vote of twenty to seven, and the House by a vote of eighty-nine to eight. The bill was approved by the Governor on the 25th day of March, 1874. Its constitutionality was again assailed. It was resisted by the same parties who had opposed the former bill. Able counsel were employed on both sides, Messrs. Glover & Shepley and Thomas T. Gantt appearing for the contestants, and Thomas C. Reynolds, in behalf of the county, for the bill. In eight months and five days from the date of its passage, the Supreme Court unanimously pronounced it valid and constitutional in all of its provisions, but eliminated the clause which declared that the appraisement of the year 1873 should be a guide in fixing the value of the land to be taken.

The appraisers, named by your Honorable Court, were accepted by the owners of the land, and on the 27th day of March, 1875, after patient investigation and labor, reported the value of the land to be the sum of seven hundred and ninety-nine thousand nine hundred and ninety-five dollars (\$799,995).

The awards were generally acquiesced in, a decree of condemnation was made by the Circuit Court, and the Board of Commissioners were put in possession.



Five owners of small tracts asked for new appraisements, for reasons stated in their several petitions. The prayer was granted and some unimportant changes made in the valuation, and the entire amount of the appraisement paid to the owners under the orders of your Honorable Court.

### ORGANIZATION OF THE BOARD.

The Board of Commissioners convened for the first time on the 17th day of June, 1874, and consisted of Joseph O'Neil, Hiram W. Leffingwell, Ansyl Phillips, John J. Fitzwilliam, Peter G. Gerhart, John O'Fallon Farrar and Andrew McKinley. Its organization was effected by the election of Andrew McKinley, President; Ansyl Phillips, Vice President; and Chas. Bland Smith, Secretary. All of these officers were re-elected at the next annual meeting and the Board remains the same, except that Chauncey F. Shultz, having succeeded Joseph O'Neil as Presiding Justice of the County Court, is now ex-officio a member of the Board.

By-Laws for the Government and Regulation of Forest Park, as then adopted by the Board of Commissioners, will be found in Appendix E.

No Commissioner receives any compensation for his services, nor can any one of them under the law, have any contract connected with the Park.

### RAILROAD MATTERS.

The law establishing Forest Park contains the following proviso: "Provided that nothing in this act contained, shall prevent the St. Louis County Railroad Company from using and occupying a right of

way, of a width of seventy feet through the north-eastern portion of said Forest Park. The said Railroad, shall enter the Park through Duncan's subdivision on the east side of said Park, and running westwardly on the northern side of the River des Pères, shall pass out of said Park at a point on the northern line thereof, east of Union Avenue, provided further that no switch or siding shall be constructed by said Railroad Company in said Park, nor shall more than one depot be established in said Park, and that shall be for passengers only: and provided further that the grade of said Railroad, as far as the same runs through said Forest Park, shall be approved by said Park Commissioners."

The topography of that portion of the Park, through which the law authorizes the Railroad to be built, could scarcely have been, in all respects, more favorable to the necessities of the Park, at this, its point of principal approach.

Its line through the Park presents a grand and graceful reverse curve nearly four thousand feet long, and enters from the direction of the city through a cut twenty-five feet deep, to be occupied by a tunnel three hundred feet long. Over this the eastern Boulevard of the Park will pass, leaving the railroad entirely out of view, and reunite its northern and southern portions, until it emerges from the cut on an embankment, increasing in elevation to twenty-five feet over the Park road for vehicles, and there a viaduct of stone and iron is being built, and almost completed, rendering this entrance not only safe, but elegant and imposing.

On the 11th day of August last, a tripartite agreement was made by this Board, the St. Louis County Railroad and the St. Louis, Kansas City & Northern Railway Companies, by which the latter undertook to construct the line of road through the Park, and was subrogated to some of the privileges belonging to the St. Louis County Railroad, and the difficult problem of park cost and improvement was only solved when this agreement was made. The proviso above referred to, did not empower the Board to dictate the alignment of the railroad through the Park, nor even to fix its grade, but only to *approve* a grade when offered by the railroad company.

These companies met the Board in a fair and liberal spirit in adjusting the numerous and embarrassing questions which always attend the passage of a great line of steam railway through a costly and elegant place of public recreation; and although this work will be expensive, both to the railroads and the Park, the Board hopes and believes that the terms agreed upon will be entirely satisfactory to your Honorable Court and to the public.

From the agreement above-mentioned, it will appear that the railroad companies have undertaken to construct a tunnel one hundred feet long, instead of leaving, as they might have done, an open cut; to make a double instead of a single track; to make an embankment of earth, instead of trestlework or other cheap device; to sod or seed the same and keep it in condition at their own proper cost and expense; to fence, or roof over, in an ornamental manner, the track; and generally to manage the road so as to give the least possible inconvenience or annoyance in running through the Park. It is also agreed that the sum of three thousand dollars shall be placed at the disposal of the Board, with which to build a depot, so that its plan and style of architecture shall correspond and harmonize with its surroundings. Among the most important clauses in the agreement is that by which the railroad companies covenant to permit any other railroads to have and use a right of way through the Park over their line and up to its terminus in the city of St. Louis, for a fair and equitable compensation.

Your Honorable Body will recollect the solicitude felt in common by the Judges of the County Court and the members of this Board, when, during the last summer, the St. Louis, Kansas City & Northern Railway Company attempted to interpose a new line of railroad between the city and the Park.

Two additional viaducts for the use of visitors on foot, under the railroad, are being built, and safe communication is thus furnished to pedestrians, as well as to vehicles; indeed, it is difficult to imagine how any accident can occur, unless through the wilfulness of the visitor.

The railroad through the park is being rapidly constructed, and when completed, will furnish quick and cheap transit from the Union Depot.

The sum to be paid out of the Park Fund will be about forty thousand dollars. These structures along the railroad line, while they answer the necessities of the road, at the same time substitute the usual expensive (but purposeless) features of display at the principal entrances to public parks, and from their nature and purpose must of necessity be solid and permanent.

## MONUMENTS.

The statue in bronze, of colossal size, of the late Edward Bates, one of Missouri's distinguished citizens, has been acquired from the Bates Monument Association, upon terms approved by your Honorable Court. The statue and pedestal, both by the celebrated sculptor, J. Wilson MacDonald, will grace some beautiful spot in the Park, and will probably be unveiled during the month of June next.

An application has been made to the Board of Commissioners, for the dedication of a suitable spot for the erection of a statue of the great Apostle of Temperance, Father Matthew.

Active movements are also on foot to obtain the means to erect monuments to the memory of Daniel O'Connell, and our late fellow citizen, Gen. Francis P. Blair. The Board earnestly sympathizes with these movements and will gladly appropriate any suitable grounds that may be asked for.

## COST OF THE PARK.

Up to January 1st, 1876, Forest Park has cost the County of St. Louis:

For lands.....	\$ 820,000 00
For construction (including all incidental expenses).....	227,889 16
Total.....	<u>\$1,047,889 16</u>

The outlay for the land and construction must be regarded chiefly as an investment for the future, the full realization of which must await the growth of population and the extension of the city over ground now at waste. The enhancement in the value of life and in the taxable value of the surrounding lands, must immediately follow the improvements in the Park now in progress, to be completed, and in an enjoyable condition by midsummer of the current year. The several lines of steam railways which will reach the Park from the Union Depot will furnish unusual facilities to visitors of all classes, and will make the number of visitors to Forest Park proportionately larger than in other cities possessing large Parks. The average number of foot passengers in other great Parks of our country has (under the usual conditions) been about fifty (50) per cent. of the entire number.

To give an idea of the vast number of persons who visit some of our public Parks, I insert from the Second Annual Report of the Board of the Department of Public Parks in the city of New York, the following:

TABLE SHOWING THE NUMBER OF VISITORS TO CENTRAL PARK FOR  
EACH MONTH DURING THE YEAR 1871, NOT INCLUDING  
SLEIGHS AND VELOCIPEDES.

1871.	PEDESTRIANS.	EQUESTRIANS.	VEHICLES.
January.....	145,283	2,702	70,350
February.....	127,148	3,026	58,578
March.....	118,464	4,401	82,782
April.....	234,552	6,915	126,733
May.....	436,534	7,507	135,037
June.....	467,620	6,829	165,186
July.....	506,263	6,005	142,445
August.....	384,426	13,966	148,114
September.....	418,298	6,408	216,155
October.....	296,936	5,518	211,926
November.....	166,750	6,190	140,844
December.....	247,800	5,380	113,365
Totals.....	3,549,774	74,847	1,611,515

Central Park is about the same distance from the City Hall that Forest Park is from our Court House; but the former is only to be reached by its principal drives and by street railroads, while we confidently expect, by the first of June next, to have quick transit by steam, to the Park, by the Missouri Pacific; the St. Louis Kansas City and Northern; the St. Louis County, and the West End Narrow Gauge Railways, to be speedily followed by an extension of all street railroads running west. The three first mentioned will make the distance from the Union Depot in less than twelve minutes. The general closing of shops on Sunday will doubtless

make that the gala-day, and it will be the care of the Board to open foot-paths, at the earliest possible day, to the most attractive features of the Park.

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## GENERAL PLAN OF IMPROVEMENT.

### SURVEYS.

Under the able direction of Julius Pitzman, the first engineer of the Park, an exact topographical survey was made, and a map of large scale was completed, within the short period of four months. This map has been, and will continue to be, the basis of all constructive operations. The plans of the eastern half of Forest Park were so materially influenced, if not controlled, by the right of way of the St. Louis County Railroad, that the difficult problem of forming and perfecting the grand plan, required the most earnest attention of the Board of Commissioners, and its solution was not reached until the contract between the Railroads and the Board was signed on the 11th day of August, 1875. It will therefore appear that within five months the General Plan of Improvement has been agreed upon, and approved by the Board. On the 15th of April last, the work in the Park was inaugurated, and a well organized force of laborers were on that day set to the task of generally cleaning the grounds and other preliminary work. The now well developed plans are being carried out under the direction of the Board, by Max G. Kern, General Superintendent and Landscape Gardener, and Henry Flad, Civil and Topographical Engineer of the Park.

### DESCRIPTION.

FOREST PARK contains one thousand three hundred and seventy-two acres (1,372); fronts on King's Highway (5,488 ft.) fifty-four hundred and eighty-eight feet, and extends almost due west, within



parallel lines, about eleven thousand (11,000) feet. It is distant from the Court House four and one-tenth ( $4\frac{1}{10}$ ) miles and embraces fully eleven hundred acres of forest. From the eastern Boulevard, looking westwardly, the general surface of the Park rapidly slopes to a depression at the River Des Pères of forty (40) feet above the city directrix; thence it rises again to the greater elevation of one hundred and fifteen or twenty feet, and extending westwardly with alternating valleys and hills, whose general direction is north and south, it reaches the altitude of one hundred and eighty feet above the city directrix, the highest point in the Park: That section of the Park, embracing about two hundred and seventy-five acres, which lies on the north side of the river, has a lower level averaging about sixty feet above the directrix and affords the site of the principal lakes. Vistas connecting these meadow lands with the hill sides and higher elevations, will bring both into full view and present them in charming contrast. The principal lake will be seen from most of the prominences of the opposite uplands, lying, as they do, in a crescent-like form, as well as from the extensive meadows of the lower lands.

#### BOULEVARD.

A Boulevard, one hundred and thirty feet wide and about six thousand six hundred feet long, bounds the entire eastern front of the Park, and maintains an average level of ninety feet above the city directrix. Parallel with, and adjacent to this grand Boulevard in its entire length, is the King's Highway, which the Board hopes may be included by means of a suitable appropriation under an order of your Honorable Court in its general design, thus presenting a Boulevard of one hundred and ninety feet in width. No Park in our country has a front so grand and imposing, and its temporary improvements, as designed in the general plan, will be attended with comparatively little cost. The drive in the Park Boulevard will be sixty feet wide, all beyond this will be adorned with trees, grass, shrubs, and pedestrian paths. From it there are four principal entrances to the Park.



## ROADWAYS.

The accompanying topographical map illustrates the care which has been taken in locating the drives so as to avoid all deep cuts and heavy fills; to reach all objects of interest and beauty; to avoid, as far as possible, unnecessary destruction of trees; and to encircle, and at the same time make accessible, the great natural lawns which occupy every eminence. A careful investigation of all matters connected with the construction of Park roads, has led the Board to adopt that, which, after much costly and vain experiment elsewhere, has proved to be the most enduring and inexpensive plan. It is composed of rip-rap, five or six inches deep, carefully laid with the hand; a layer of the debris of the coal mines (found in abundance in the Park) sufficient to fill interstices; an additional course of macadam about four inches, the whole to be covered with about two inches of gravel. The surface will be thoroughly rolled. On each side of the road are trenches, of the required depth, in which are laid vitrified stone pipe, of such size as may be demanded by the quantity of water they are required to carry. These trenches are closed by carefully constructed gutters, with brick inlets, at intervals of from one hundred to three hundred feet. In drainage, permanency and economy, these roads are believed to be equal to any in use in Parks, and cost about sixteen thousand dollars a mile. No repairs resulting from Park use will be needed, beyond a slight coating of gravel from time to time.

## BRIDGES.

Six bridges wholly of wood, and rustic in design, have also been built, and three with stone piers and abutments and superstructure of wood, are completed and now in use; while two others of the latter class are in rapid progress of completion. A large arched culvert, twenty feet span, is also being built, with stone faces and parapets. Two other bridges, for vehicles, will be required at some future day to make all the connections presented by the plans accompanying this report. Of the above-mentioned bridges, seven span the

River des Pères, five of which are completed and in use. In taste, appropriateness, and economy, these bridges will commend themselves to the approval of the public, and, as numerous as they are, were only constructed where deemed essential to a harmony of design in the general plans, and for intercommunication between leading objects of interest.

#### BUILDINGS.

As heretofore stated, only two antiquated buildings were found within the boundaries of the Park. One known as the "Forsyth House or Place," has been metamorphosed at small cost, into "The Cottage," to be used as a place of refreshment; the other, known as the "Cabanné Place," is situated near the line of the grand Eastern Boulevard. It is now used as an office building for the Superintendent's and Engineer's Departments, but will be converted into a "Lodge" as soon as the new structure, now in progress of erection near Union Avenue, shall be completed. The latter building, as well as that first mentioned, were designed by J. H. McNamara, Architect. The former is to be occupied by the executive officers at the Park and the police force. A frame building has also been erected near the southern boundary line of the Park, and is now used for the accommodation of laborers, but will, during next summer, be changed into a Propagating House for exotic plants.

The prospective features of interest to be included in Forest Park, as designated on the general plan, have been ably treated in the report of the General Superintendent and Landscape Gardener (Appendix "B") and cannot fail to commend themselves to all who will study these plans.

The able report of the Civil and Topographical Engineer on the constructive operations in the Park, exhibits great care and labor, and will be found in Appendix "C."

Appendix "A" embraces the report of the Secretary and Treasurer.

Appendix "D" contains the report of the Police Department.

The first Engineer of the Park, Julius Pitzman, much to the regret of the Board of Commissioners, resigned his office on the 1st day of August last, and was succeeded on the same day by Henry Flad, the present Chief Engineer.

The Board takes great pleasure in announcing its appreciation of the zeal and fidelity displayed by the principal subordinate officers of the Park; and with great satisfaction call the attention of your Honorable Court to the wonderful development and embellishment created by their genius and professional accomplishments, and effected within the short period of seven months. The other officers and employés are entitled to the meed of your approval, for never has a more faithful and orderly body of men been employed on a public work.

To the County Court of St. Louis County is due the early enjoyment of Forest Park by our people.

Promptly and zealously the Court has taken the responsibility of such steps as were necessary to its acquisition; and all orders asked for by the Board of Commissioners for that purpose have been unhesitatingly granted. A close vigilance has been exercised by your Honorable Court over the appropriation of the Park funds, while your action has been marked with uniform courtesy to the Commissioners.

Very respectfully,

ANDREW McKINLEY,

*President.*



# APPENDIX A.



REPORT

OF THE

SECRETARY AND TREASURER.





FOREST PARK, SECRETARY'S OFFICE,  
ST. LOUIS, *January 1st, 1876.*

HON. ANDREW MCKINLEY,

*President of the Board of Commissioners of Forest Park.*

SIR :

I have the honor to submit the enclosed statements of the receipts and expenditures of Forest Park for the year ending December 31st, A. D., 1875 :

No. 1. The detailed statement of receipts from all sources, of money, and the disbursement of the same.

No. 2. The monthly amount of warrants drawn by the order of the Board of Commissioners upon the County Treasurer, and its disbursements.

No. 3. The detailed statement of receipts from the sales of hay, wood, etc., at the Park, and its expenditure.

No. 4. A summary of receipts and disbursements for the year ending December 31st, 1875.

Also, the property account of the general office.

The number of warrants issued to this date, inclusive, amounts to \$225,957.50, and number respectively from No. 1 to No. 276, inclusive, and accord in amount with the statement rendered by the County Treasurer to the Board of Commissioners.

My account shows the warrants issued by the Board at its meeting of yesterday, December 31st, 1875, but cannot be approved by the Hon. County Court until Monday next, January 3d, 1876, deeming it advisable to embrace these issues in my statement of the expenditures in 1875.

Very respectfully,

CHAS. BLAND SMITH,

*Secretary.*

## STATEMENT NO. 1.

BALANCES OF ACCOUNTS ON DECEMBER 31st, 1875.

To Warrant account.....	\$225,957 50	
" Sales of Hay and Wood.....	1,511 48	
" Pound receipts.....	10 30	
" Rent account.....	50 00	
" St. Louis, Kansas City & Northern Railroad .....	359 88	
By Improvement account, Engineer Department.....		\$548 07
" Tool and Implement account, Engineer Department.....		133 25
" General office account.....		4,856 60
" Salary account.....		6,166 79
" Expense account, Police Department.....		255 00
" Expense account, Engineer Department.....		2,510 62
" Improvement and Construction account, Superintendent's Department.....		12,056 18
" Tool and Implement account, Superintendent's Depart- ment.....		4,334 35
" Expense account, Superintendent's Department.....		2,606 19
" Pay roll account, Engineer's Department .....		10,825 91
" Pay roll account, Superintendent's Department.....		98,513 93
" Pay roll account, Police Department.....		3,787 17
" Minor expense account, (discharges).....		14,382 21
" Cash account, pound fines.....		10 30
" Warrant account, cash .....		5,851 96
" Sewer account, Engineer's Department.....		7,820 36
" Gravel account, Superintendent's Department.....		1,923 90
" Rent account.....		677 10
" Bridge account, No. 1, 2, 3.....		8,966 35
" Building account .....		9,123 33
" Bates Statue account.....		3,000 00
" Trenches account.....		2,073 57
" Passage way account.....		5,038 40
" Insurance account.....		240 00
" Gutterings account.....		2,191 46
" Culvert account.....		1,317 95
" Railroad viaduct account.....		7,115 44
" Inlet account .....		178 20
" Rip-rap and McAdam account.....		1,857 93
" Hardware account.....		640 94
	\$227,889 16	\$227,889 16

STATEMENT NO. 2.  
MONTHLY RECEIPTS AND EXPENDITURES OF WARRANTS.

1875.				
March 31.	To Pay roll.....	\$900 00		
	" Expense account .....	1,314 91		
	By warrants on County Treasurer.....		\$2,214 91	
April 30.	To pay roll.....	339 00		
	" Expense account .....	768 05		
	By warrants on County Treasurer .....		1,107 05	
May 31.	To pay roll.....	13,791 90		
	" Improvement and construction account.....	1,385 00		
	" Tool and implement account.....	153 00		
	" Expense account.....	1,688 54		
	By warrants on County Treasurer.....		17,018 44	
June 30.	To pay roll.....	16,815 07		
	" Improvement and construction account.....	4,127 75		
	" Tool and implement account.....	1,225 01		
	" Property account.....	895 00		
	" Expense account.....	227 50		
	By warrants on County Treasurer.....		23,290 33	
July 31.	To pay roll.....	24,018 04		
	" Improvement and construction account.....	4,824 14		
	" Tool and implement account.....	948 39		
	" Property account.....	430 00		
	" Expense account.....	2,950 99		
	By warrants on County Treasurer.....		33,171 56	
Aug. 31.	To improvement and construction account.....	3,161 36		
	" Tool and implement account.....	346 64		
	" Minor expenses (time checks).....	500 00		
	By warrants on County Treasurer.....		4,008 00	
Sept. 30.	To pay roll .....	17,941 58		
	" Improvement and construction account.....	2,983 05		
	" Tool and implement account.....	488 02		
	" Expense account.....	2,194 54		
	By warrants on County Treasurer.....		23,606 99	
Oct. 31.	To pay roll.....	21,558 21		
	" Improvement and construction account.....	7,757 97		
	" Pay roll (November).....	18,781 51		
	" Tool and implement account.....	770 94		
	" Expense account.....	1,535 22		
	By warrants on County Treasurer.....		50,403 85	
	Over.....	\$154 821 13	\$154 821 13	

	Over.....	\$154,821	13	\$154,821	13
Nov. 30.	To property, minor expense account, etc.....	3,388	26		
	" Tool and implement account.....	1,503	44		
	" Improvement and construction account.....	14,360	07		
	By warrants on County Treasurer.....			19,251	77
Dec. 31.	To pay roll (November).....	12,519	21		
	" Improvement and construction account.....	29,091	88		
	" Tool and implement account.....	111	80		
	" Expense and minor expense account.....	4,309	75		
	" Pay roll (December).....	5,851	96		
	By warrants on County Treasurer... ..			51,884	60
		\$225,957	50	\$225,957	50

## STATEMENT NO. 3.

## DETAILS OF REVENUE FROM THE PARK AND ITS EXPENDITURE.

1875.					
May 21.	By discharges, voucher No. 1.....			\$62	50
31.	To sale of wood.....	\$62	50		
June 14.	By discharges, voucher No. 2.....			86	00
30.	To sale of Wittenberg house.....	75	00		
30.	To sale of wood.....	11	00		
July 12.	By discharges, voucher No. 3.....			7	00
31.	To sale of hay .....	7	00		
31.	To sale of wood.....	385	00		
Aug. 31.	To pound receipts.....	6	30		
31.	To sale of wood.....	107	30		
Sept. 30.	To sale of old lumber.....	10	00		
30.	To sale of wood.....	572	68		
Oct. 15.	By expense account, voucher No. 4.....			192	00
31.	To sale of hay and grass.....	121	50		
31.	To sale of wood.....	146	00		
Nov. 30.	To rent of boarding house.....	50	00		
30.	To sale of wood.....	13	50		
30.	To pound receipts.....	1	00		
30.	To St. Louis, Kansas City & Northern Railroad.....	359	88		
Dec. 31.	By discharges, voucher No. 5 .....			1,573	86
31.	By cash on hand.....			10	30
		\$1,931	66	\$1,931	66

STATEMENT NO. 4.  
SUMMARY.

RECEIPTS.		
By warrants No. 1-276.....		\$225,957 50
By wood and hay sold.....		1,511 48
By rent collected.....		50 00
By St. Louis, Kansas City & Northern Railroad.....		359 88
EXPENDITURES.		
To expenses paid by warrants.....	\$225,957 50	
To expenses paid from receipts of sales.....	1,921 36	
To cash belonging to Public School Fund .....	10 30	
	<u>\$227,889 16</u>	<u>\$227,889 16</u>

CHAS. BLAND SMITH,

*Secretary.*

## PROPERTY RETURN OF GENERAL OFFICE.

3 Desks.	2 Stoves and fixtures.
1 Table.	6 Towels.
10 Chairs.	2 Office seals.
76 Yards carpet.	4 Spittoons.
1 Clock.	1 Waste basket.
1 Letter press.	1 Looking glass.
1 Bucket.	1 Iron safe.
1 Washstand.	1 Lounge.
1 Bowl and pitcher, etc.	1 Water cooler.
4 Tumblers.	1 Ladder.
1 Hatchet.	1 Cash box.
1 Carriage.	1 Sprinkling can.
1 Wagon.	2 Dusters.
2 Horses.	1 Pair shears.
3 Blankets.	1 Ruler.
2 Halters.	1 Ruling pen.
2 Erasers.	6 Paper weights.
4 Inkstands.	









## APPENDIX B.



REPORT

OF THE

SUPERINTENDENT & LANDSCAPE GARDENER.



ST. LOUIS, *January 1st, 1876.*

TO THE HONORABLE ANDREW MCKINLEY,

*President of the Board of Commissioners of Forest Park.*

I have the honor, herewith, to submit the first annual report of the Superintendent and Landscape Gardener's department of Forest Park; also a tabular statement of all the employés of this department, their occupation and time employed, and amounts paid for the same. An inventory of all the property held in trust by this department is also added.

On the fifteenth day of April last, ground was formally broken by yourself, and active operations commenced, with a force of three hundred laborers.

A public enterprise, for years the subject of animated debate, was thus fairly inaugurated, the full realization of which will, at no far distant day, become a most important link in the chain of modern improvements which is to encircle the great Metropolis of the Mississippi Valley.

Your Honorable Board, together with many of the Park's most ardent friends, have started this enterprise with the rational supposition that a comparatively small amount of treasure, entirely inadequate for the completion of an extensive park, when judiciously expended, can transform a tract of land, so richly endowed by the hand of nature, into a natural forest Park of great attraction, inviting, not in years to come only, but from this day forward, the masses of the populous city of St. Louis, to spend the holidays of the summer season beneath its majestic canopy of shade, and to breathe, on some occasions at least, the pure and undefiled atmosphere of the woodlands and the meadows. The programme adopted for all preliminary operations has strictly tended to the attainment of this object.

Remembering that the Park tract was made up from a variety of forests, commons, dairies, orchards, coal mines and cultivated

fields, it will be readily understood that the operations of the first few months, were purely of a pioneering, rough and ready nature. Old orchards, division fences, barns and shanties, together with many offensive nuisances surrounding them, disappeared in quick succession. The woods and open grounds were cleared of stumps, and the debris of timber, and columns of smoke and fire, indicated to the surrounding country, the precise location of the future Park.

To establish a general line of communication with all the various sections of the park, the river and main ravines had to be bridged over in different directions, and road-ways were opened to disclose the many inviting scenes of the uplands and the valleys. These preliminary drives, of some six miles in length, were graded sufficiently to secure a smooth and easy passage throughout the greater portion of the grounds.

These labors occupied the working force for nearly four months, being, however, greatly impeded by the incessant rains of the past season. The result was fully satisfactory, in so far at least, as it opened a Forest Park, *de facto*, to the public, of whose existence and location the greater majority of our citizens had been unaware before.

To judge from the daily attendance, increasing rapidly, from month to month, it would seem that the Park has gained in popularity very rapidly. The happy selection of the grounds, and the untiring energy and perseverance of the projectors and advocates of this public enterprise, has frequently been acknowledged and commended by many, who, but recently, had entertained bitter prejudices against the Park.

Whilst this "clearing of the tract" was being performed to prepare the way for permanent improvements, the Engineer Department was industriously engaged in topographical surveys, and in compiling a general map, showing the conformation of the ground, in minute detail. Since the completion of this important work, operations have been conducted in the usual systematic routine, made possible only by accurate calculations.

The leading approach roads into the interior of the Park from north and south, have received the foremost attention, both lines being fully graded, and ready for construction. The principal lines of drives throughout the interior of the Park, already chosen in accordance to the conformation of the ground, cleared of timber and obstructions, have undergone a minute survey, and many sections thereof are finally graded and established.

The report of the Chief Engineer will show the extent of this important branch of the work performed up to the present time.

The grading, shaping and preparing of broad acres of lawn, has in like manner, occupied a great portion of the laboring forces. The cultivated fields of the Forsyth Farm have been properly prepared and seeded. The same has been done to many of the slopes along the line of the graded drives, as well as to a number of unsightly and neglected spots. Fully one hundred acres of lawn are thus prepared, awaiting only the return of spring to show forth the newly arranged dress of mother earth.

Large quantities of material, necessary for the filling and grading of the lawns, have been obtained from extensive slopes, made on the river banks, and also by the excavation of two lakes, made in the low lands of the north-eastern part of the Park.

The force of carpenters has been engaged in the construction of seven bridges across the river, of seventy to one hundred feet in length; and of five smaller viaducts over ravines. A commodious frame house, temporarily used for the accommodation of the laboring men, two sheds for carriages in rear of the restaurant, one large shed for the use of the Mounted Police, one rustic shed for carriages and one stable have also been erected by this force.

Your Honorable Board has ordered the construction and metalizing of nearly four miles of drives, extending to almost the centre of the Park. This work is in full course of execution. The detailed account, relating to drainage, guttering and construction, being under the charge of the Chief Engineer, will appear in his report. In like manner, will the construction of the Railroad viaducts and tunnel be reported.

Mention may also be made of the Restaurant and the Park Office Building; both structures are, however, under the direct charge of a Building Committee appointed by the Honorable Board of Commissioners, and, therefore, outside of the province of the Superintendent.

The several officers of this department have greatly assisted the Superintendent by the faithful performance of their several duties; the decorous behavior of the laboring men deserves special mention. The recollection of the many busy days in the field this season is marred only by one sad accident, causing the instant death of one esteemed laborer.

### THE PARK,

Covering an area of over two square miles, is a tract of land favored very distinctly by the designing hand of nature. A natural forest extends in great variety of scenery over one thousand acres. This forest has escaped, accidentally, providentially perhaps, the woodman's axe, which, in the name of modern improvement, is too apt to destroy the time-honored groves around the great cities of our land.

Its scenic characteristic is a true type of the western woodland prairie, whose graceful, gently undulating lines, are distinctly contrasted with the bolder forms of scenery found in other places, impressing the mind with a pleasant air of repose, rather than with exalted admiration. The surrounding country, seen from many elevated points of view, is prairie like, but greatly diversified by many forest-covered elevations, dotted in all directions with signs of life and improvement, denoting the close proximity of a mighty city. The inside scenery is attractive and intricate in the extreme, consisting of an uninterrupted variety of groves and lawns, of valleys and wood-embowered hillsides. A wild and uncontrollable prairie stream, sufficiently strong to float a stern-wheel steamer at certain times, at others almost devoid of water, traverses in a strangely meandering line of four miles in length, the area of the Park. A line of gently rising bluffs, covered in greater part with a luxuriant forest growth, follows the southern and western



shores of this river, dividing the forest-covered uplands from the lowlands of the valley. The Park is, therefore, naturally divided into three distinct parts, the characteristics of which control, in great measure, all contemplated plans of improvement: these are, the upland plateaus south of the river, the valley meadows extending along its northern shores, and the river valley forming the eastern portion of the Park, bordered both east and west by higher elevations.

A turnpike, the Clayton Road, traverses the south-eastern corner, to the great annoyance of the interests of the Park. This public highway, it is confidently hoped, will be removed to the outside, at no far distant day. Union Avenue, formerly a popular drive through the forest, from north to south, has already exchanged its former offensive course, with a new and graceful line, following the natural depressions of the ground.

The Park is bounded on its eastern front by King's Highway, the oldest landmark of the former territory of Louisiana, and situated one and a half mile west of the present corporate limits of the city. This Avenue is the terminus of several of the most central thoroughfares of the city, making it the principal entrance to the Park. Before many years will have passed by, the improvements of the city will extend to this grand entrance, and furnish the usual lines of communication with all parts of the city. For the present, the masses of the people will reach the Park by three railroad lines: the Missouri Pacific, at the south; the St. Louis, Kansas City & Northern; and the West-end Narrow Gauge Railroads, on the northern side.

### THE FOREST GROWTH

Is made up of a great variety of trees, and shrubs, and climbing vines. The surface of the ground is covered with the luxuriant grasses of the meadow and the forest, and liberally enlivened by wild flowers.

The upland forests are made up principally of the family of oak and hickory. The richer soils of slopes and valleys produce a far greater variety of trees and shrubs, a list of which is given below.

The undergrowth of some localities of the forest is peculiarly interesting, forming, in connection with far-spreading vines, a wild and pleasing native scenery of its own. The river valley is ornamented by many gigantic specimens of the elm, the sycamore, the maple, cottonwood and other trees.

LIST OF INDIGENOUS TREES AND SHRUBS FOUND IN FOREST PARK  
IN ITS PRIMITIVE STATE.

<i>Quercus Alba</i> .....	White Oak.
" <i>Tinctoria</i> .....	Black Oak.
" <i>Rubra</i> .....	Red Oak.
" <i>Coccinea</i> .....	Scarlet Oak.
" <i>Bicolor</i> .....	Swamp White Oak.
" <i>Palustris</i> .....	Pin Oak.
" <i>Nigra</i> .....	Black Jack.
" <i>Imbricaria</i> .....	Laurel Oak.
" <i>Macrocarpa</i> .....	Bur Oak.
" <i>Obtusiloba</i> .....	Post Oak.
" <i>Aquatica</i> .....	Water Oak.
" <i>Ilicifolia</i> .....	Black Scrub Oak.
<i>Carya Alba</i> .....	Shell-bark Hickory.
" <i>Microcarpa</i> .....	Small Fruited Hickory.
" <i>Tomentosa</i> .....	Mockernut.
" <i>Amara</i> .....	Bitternut.
<i>Juglans Nigra</i> .....	Black Walnut.
" <i>Cinerea</i> .....	Butternut.
<i>Platanus Occidentalis</i> .....	Sycamore.
<i>Ulmus Americana</i> .....	White Elm.
" <i>Fulva</i> .....	Slippery Elm.
" <i>Racemosa</i> .....	Corky Elm.
<i>Acer Dasycarpum</i> .....	Silver Maple.
" <i>Rubrum</i> .....	Swamp Maple.
<i>Negundo Aceroides</i> .....	Ash-leaved Maple.
<i>Aesculus Glabra</i> .....	Buckeye.
<i>Betula Nigra</i> .....	Red Birch.
<i>Tilia Americana</i> .....	Linden.
<i>Populus Monilifera</i> .....	Cottonwood.
<i>Fraxinus Viridis</i> .....	Green Ash.
" <i>Quadrangulata</i> .....	Blue Ash.
" <i>Sambucifolia</i> .....	Black Ash.

<i>Gymnocladus Canadensis</i> .....	Kentucky Coffee Tree.
<i>Gleditschia Triacanthos</i> .....	Honey Locust.
" <i>Monosperma</i> .....	Water Locust.
<i>Morus Rubra</i> .....	Red Mulberry.
<i>Celtis Occidentalis</i> .....	Hackberry.
<i>Nyssa Multiflora</i> .....	Sour Gum.
<i>Prunus Serotina</i> .....	Wild Cherry.
" <i>Americana</i> .....	Wild Plum.
<i>Cercis Canadensis</i> .....	Red Bud.
<i>Sassafras Officinale</i> .....	Sassafras.
<i>Asimina Triloba</i> .....	Papaw.
<i>Salix Fragilis</i> .....	Brittle Willow
" <i>Nigra</i> .....	Black Willow.
" <i>Humilis</i> .....	Prairie Willow.
<i>Pyrus Coronaria</i> .....	Crab Apple.
<i>Crataegus Tomentosa</i> .....	Black Thorn.
" <i>Coccinea</i> .....	Red-fruited Thorn.
<i>Rhus Typhina</i> .....	Sumach.
<i>Rhamnus Lanceolatus</i> .....	Buck Thorn.
<i>Evonimus Americana</i> .....	Strawberry Bush.
<i>Sambucus Canadensis</i> .....	Elder.
<i>Cornus Florida</i> .....	Flowering Dogwood.
" <i>Paniculata</i> .....	Dogwood.
<i>Hydrangea Arborescens</i> .....	
<i>Ribes Grossularia</i> .....	Wild Gooseberry.
<i>Rosa Setigera</i> .....	Prairie Rose.
<i>Rubus Strigosus</i> .....	Wild Raspberry.
" <i>Villosus</i> .....	Blackberry.
" <i>Canadensis</i> .....	Dewberry.
<i>Symphoricarpus Vulgaris</i> .....	Indian Currant.
<i>Corylus Americana</i> .....	Hazelnut.
<i>Vitis Labrusca</i> .....	Wild Vine.
<i>Ampelopsis Quinquefolia</i> .....	Virginian Creeper.
<i>Celastrus Scandens</i> .....	Staff Tree.
<i>Smilax Rotundifolia</i> .....	Green Briar.
<i>Rhus Toxicodendron</i> .....	Poison Vine.

## THE GENERAL PLAN

Has been the subject of much study and reflection. The deep interest taken by the President during the whole of the past year, in constant consultation with the Chief Engineer and the Landscape Gardener,

has greatly assisted the decisive adoption of the basis of the present plan. Your Honorable Board has very wisely preferred natural considerations and rational judgment, to richly colored plans on paper. Topics of general necessity have received your foremost attention. The improvement of the eastern front, the railroad traversing the grounds, its viaducts and tunnel, the drives and leading lines of communication, including all necessary bridges and other structures; all these considerations have in succession received the attention of your Honorable Board, and various detailed plans have been adopted. Their combination forms a frame work upon which the public of St. Louis can build a superstructure, commensurate with the future greatness of their city. For the present, the Board of Commissioners is striving to create, with a small outlay, a Park, perfect and reasonably attractive as a whole, though in its infancy in point of execution and final finish. A successful solution of this problem should fully satisfy the intelligent portion of the people, and should surely pacify the opposition, made generally against all timely public improvements, in the pretended name and interest of the oppressed and much-abused tax-payer.

In compiling the general plan of improvement, embracing the treatment of all localities and interests of the Park, the Landscape Gardener has been guided by two objective points of view. First, to create as great a variety of scenery as the grounds will admit of; and second, to introduce a reasonable number of features of attraction, not only such as are calculated to amuse, but also those which will instruct and improve the public mind. Suggestions in this direction, requiring for their realization large sums of money, will undoubtedly be viewed by many as the futile dream of a wild imagination. Their mention, however, can do no harm, and may, perhaps, awaken some interest in the study of the various channels through which the masses of over-crowded cities might receive that healthful recreation, exercise and amusement, which is most beneficial to the welfare of the mind and body.



*Photo-Engraving. C. N. Dey. Saint Louis, Mo.*



## DETAILS OF THE PLAN.

The conformation of the ground suggests most forcibly the choice of locations most suitable to the pursuit of various enjoyments. The eastern portion of the Park, directly connected with all the lines of public conveyance, and nearest to the city, will ever be the congregating and rambling grounds of the masses who frequent the Park on certain days and occasions. The valley grounds—a wide and open meadow—commanding a magnificent panoramic view of the Park, are most favorably adapted to the interests of a sociable and sportive drive. The shades of the forests will naturally attract the masses of the people on the occasions of festivals and picnics, and also offer more retired drives, especially during the hours of sunshine and oppressive heat.

## THE RAMBLING GROUNDS.

In reality, the front ground of the Park is intended to be improved and ornamented in the most elaborate manner. Its various pedestrian paths and promenades will lead the visitor to many places of attraction. The grand fountain and the Sylvan lake, surrounded by verdant lawns, will be the leading features of this valley. The forest groves and lawns, in its centre, are set apart for *Young America*, and destined to be the special point of attraction to the youth, who will find no small amount of amusement on play grounds properly fitted out and guarded. A variety of rustic houses, covered seats and little temples should here be erected.

The floral promenade is located on the summit of this section. It contains a central carriage promenade, with pedestrian walks on either side; the space of twenty-five feet between these roads, is calculated for the finest display of the treasures of the Goddess Flora. A variety of fine statuary and blooming vases might here be displayed to great advantage.

The western side of the west promenade is calculated to be shaded by a rustic, overhanging canopy, provided with seats overrun by roses and other flowering climbers. The eastern slope of this



elevated ground is well adapted to be the site of a grand conservatory, in whose interior the lovely scenery of the tropics may be enjoyed; adjoining this conservatory, imagination has placed the aquarium, long promised to the public by the Commissioners of Lafayette Park.

The northern terminus of this floral promenade is designed to be a temple of music; the southern end thereof is reserved for a building site, on which an elegant museum, of art and science, may some day be erected. The gentle valley west of this promenade is most admirably suited for the keeping and display of interesting foreign animals.

The front approach or Boulevard, along King's Highway, has a carriage way of sixty feet in width; two strips of lawn twenty feet wide divide these different roadways from each other, in which a row of lofty growing shade trees will be planted. Various spaces have been designed, along the course of this Boulevard, to receive the monuments, which may, in time, be erected to the memory of the great men of the West. This front should ever be distinguished by elegance of finish and keeping, and should be brilliantly lighted during the early hours of the night.

The ramble grounds should contain a full collection of the most desirable trees, shrubs and flowers, which, when grouped in becoming order, would form an arboretum, highly interesting to the lover of horticulture.

#### THE DRIVING GROUNDS

Have various, most attractive features, bidding fair to make them the most popular section of the Park. A fast drive, or Hippodrome, of one mile in circumference, is here laid out, and designed in accordance with the most approved rules of the turf.

The Lake will occupy some twenty-five acres of the lowest grounds. Another Temple of Music, of exquisite design, will be erected forthwith near its shore. A Lake-drive, encircling the southern boundary of the water, will lend a peculiar charm to pleasure driving. The



central point of attraction will be found in the Grand Concourse connecting the Hippodrome with the Lake. From this Terrace a distant cascade will be seen, pouring its foaming waters, from one of the most elevated points, into the basin of the Lake.

A Restaurant, located in this section, will dispense refreshments to the weary.

#### THE UPLAND FORESTS AND PLAY GROUNDS,

Embracing by far the greatest space of the grounds, should, in great part, be preserved in their present country-like simplicity, "where every shaggy bush and spreading tree proclaims the seat of native liberty."

To many visitors, quite tired of the stereotyped restraints of City Parks, these forest groves and lawns will be a true relief. As places dedicated to festivals and play, they are invaluable to the people of St. Louis.

It may not be extravagant to predict, that many an ardent friend of Forest Park, into whose hands in future years its interests may be intrusted, will here be educated. The merriest days of boyhood are generally longest remembered in after years, and their due weight will be felt amongst the rising generation of this city.

Large and commodious rustic structures should be erected in the interior of the forests, for the convenience and shelter of pic-nic parties.

The south-west portion of the Park is a thick and gloomy forest. In its interior, a Deer Park and ample stable room for domestic animals, is proposed. The sheep, so necessary for the grazing of extensive Parks, will here find a retired home.

Ample provision for the keeping of a herd of superior milch cows should be made, in connection with the sheep-fold. The product of *pure* milk, derived from such an establishment, might be dispensed at fair rates to visitors. A model Dairy Restaurant, plain and country-like, could be established, which would undoubtedly prove quite popular with the masses of visitors. The rural part of this Park is indeed not perfect without this feature. And this healthful refreshment, partaken by many family groups, will never endanger its moral reputation.

But, independent of this consideration, it cannot be doubted that a system which would convert a portion of this immense domain of pasture into a productive model Dairy, would materially add to the funds required for the maintenance of the Park.

The river bluffs in this section present several commanding points of view of the far-off distance. A Prospect Tower, or Observatory, will undoubtedly be here erected at some future day. Imagination has designed for the crest of one of the most prominent points, a Miniature Castle, in the style of the middle ages, which might appear as a ruin; or in its original design. This type of scenery, so characteristic to all European rivers, should not be missing in Forest Park. How boldly it would overlook the broad expanse of scenery along the Mississippi! How many pleasant recollections of travels in foreign lands, and thoughts of home scenes by the Rhine, or by the Shannon, would it awaken in many a breast!

#### DRIVES.

The system of drives has been designed with a view to approach and disclose all points of interest and attraction. The trunk line, called the *Grand Drive*, encircles the entire area of the Park. Its general width has been established to forty feet, except in some locations, where greater width is required.

It has been objected, that this width is not equivalent to the requirements of a grand Park. This objection is answered by two obvious reasons. First: the drive commands so great a variety of scenery, and touches upon features of attraction, so far apart from each other, that it is not reasonable to presume that a majority of vehicles will move at the same time in one given direction, as is the case on the Gala Drives of other Parks, quite differently situated, where naturally greater space is needed. Second: in opening the lines through the forests, a great number of valuable trees has, of necessity, been sacrificed, admitting glaring sunshine, where, but recently, a pleasant shade was enjoyed. With a greater width of drives, this loss of shade would have been far more disastrous—a consideration worthy of great weight, in a climate so famous for oppressive heat as that of St. Louis.

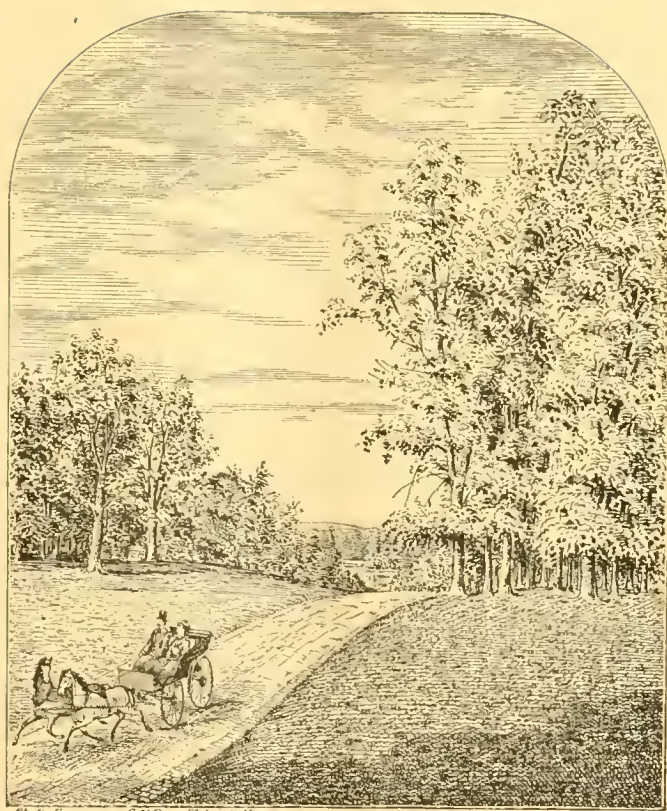


Photo-Engraving C. & D. S. St. Louis Mo.



The Drives, in many places, are provided with spacious openings (concourses), which serve as congregating and resting places, from which the most attractive views can be enjoyed.

A liberal provision for shelter from sudden storms should be made in their midst, or conveniently near to them. Many sections of drives, especially those on the dry upland soils, will remain mere surface roads, preferable by far to metal roads.

### PEDESTRIAN ROADS.

The system of pedestrian roads is confined to the most necessary lines of communication only, presuming that unrestrained ramble, over lawns and through the groves, will ever be conceded to the public.

The greater portion of walks is designed throughout the eastern part, where their constant use is most obvious.

Retired paths have been projected along the River Bluff and through the principal ravines. Pedestrian roads, running parallel with the lines of Drives, as met with in many other Parks, have not been adopted. The musing pedestrian visitor may delight in the excitement and animation of the drive, but does not care to contrast his walking capacity with the trot of his neighbor's horse.

The obstinate absence of visitors on foot from many of the Driving Parks, would seem to verify the above assertion. A certain degree of unmolested privacy has therefore been observed throughout.

The width required for these walks will vary greatly, in accordance with location. The prominent and most frequented lines should have a width of from fifteen to twenty feet; retired paths may range from six to fifteen feet in width.

### SCENERY.

Planting, grading, sodding and road making, is commonly called Landscape Gardening. Treatment of matter, however, can only shape the body of a certain piece of ground. Congruous union and rational separation, in other words, becoming arrangement, infuses a soul or creates the scenery. An indiscriminate display of objects, lines or

figures, may excite the admiration most generally bestowed by curiosity, but fails to satisfy the mind, so strangely vibrating with the pulse of Nature.

The mysterious "something still diviner than mere language can impart;" those traits of Nature, attracting most forcibly the sympathies of our mind—this is what we are accustomed to call beauty, or the beautiful.

A clear comprehension of the principles of this beauty, and its many counterfeits, together with a harmonious application and association of the same, we express by the words, *correct taste*.

The faculty to reproduce that beauty, in an endless variety of combinations, whether expressed in tones, designed in lines and colors, or carved in marble, is called "Art" or "Fine Art."

Scarcely a century has elapsed since Horticulture, the useful agent in the decoration of grounds, has discovered this real source from whence to draw its ideas of design. Exchanging the conceptions of the past centuries, founded only on mere imagination and caprice, for the simple essence of Nature's beauties, a new art has made its appearance, which is called the art of *Landscape Gardening*.

Its principles, when properly applied in the improvement of Forest Park, will produce a variety of scenery well worthy of comparison with the pleasing features of many of the modern Parks.

A single glance over the varied scenery of the Park, will convince the thoughtful observer of the imperative necessity of jealous caution to preserve, and of boldness to fully develop, the marked advantages of the grounds. Nature has surely stamped upon them her choicest traits of beauty; but accident has left them in an unfinished condition. To remove the marring tones, and to unite the really beautiful elements into one harmonious whole, is the task which the art of Landscape Gardening has to fulfill. Expression and character of scenery is conditioned by a proper balance of wood and lawn, of light and shade, of form and color. Without distinctness of outline and clearness of form, no scene of beauty can be formed. Pleasing variety is not attained by a capricious mixing up of objects, but by a judicious separation and union of the same. Applying these rational axioms of Landscape



Gardening to many parts of Forest Park, it will be readily understood that both axe and spade have an important mission to fulfill. Various groves of timber, and many single trees, obstructing the most desirable views, concealing the finest contours of the ground, and confusing the harmonious clearness of the lawns, must simply be abated without mercy. No plea of loss of shade should be listened to in this connection. The straight outlines of the woods, arising from the former division of the land, must be boldly broken, and scattered timbers, covering unmeaningly considerable extents of ground, must be transformed into distant clumps and groves. Where views of distant parts are desirable, judicious trimming of undergrowth and lower branches must be resorted to. This necessary and indispeasable cutting down of timber is often viewed with real sorrow by many a lover of the forest, and mistaken as a heartless destruction, for which the improver deserves severe reproof. We are prepared to meet these well-meant frowns with perfect resignation, until the scenery of the Park is freed from its many traits of accidental confusion.

The principle which governs a judicious selection of foliage must direct the operations of planting, and of adding new groups where they are needed, to produce variety and pleasing contrasts. The strange mistake of planless and sceneless planting, so sadly practiced in many of the so-called ornamental grounds of St. Louis, if introduced into Forest Park, would be ruinous and ridiculous. Grand forest groves and their surrounding lawns will not be improved by the addition of a confused mass of shrubbery, thrown capriciously around and over them. Such groves, standing out in bold relief, must be met by well-calculated masses, contrasting them in form and foliage. A great diversity of effects of tints and color, and of light and shade, can in this wise be created; and this variety is the principle which distinguishes the scenery of a park from the scenery of the woods. But pleasing harmony, when visible everywhere, becomes splendid monotony in the end, unless relieved here and there by bold and striking contrasts. A gradual or even sudden change from the devious forest into a scene of pines and other evergreens will be admired by even the most thoughtless wanderer. This striking change of scenery is provided

for in several of the most commanding localities of the Park. The finely-wooded elevations along the river are, in various localities, boldly interrupted by a bluff of pines. A leading concourse of roads, near the southern boundary, is confronted in all directions by heavy masses of evergreens, through which the vistas open into the forest. A drive, winding its gloomy way through the western forest, dashes the visitor, quite suddenly, into the midst of a dense pine forest, from which a broad view is open to the valley below, extending into a prairie view to the far-off skies.

Peculiar contrasts are calculated for the various ravines. The one will be the emblem of the Cypress forest; another of the graceful Hemlock; a third may bear the character of the Fir. Contrasts, appearing in succession on a drive of miles in length, will be quite pleasant episodes in this forest scenery.

I cannot but express the heartfelt wish that the good sense of the public will never permit the shocking practice of setting out numbers of evergreens, promiscuously, amongst the forest trees and through the woods. Such crude ideas of the art of Landscape Gardening should be kept away from Forest Park.

The ornamentation of the open grounds of the eastern section is somewhat different from the treatment of the forests. A purely horticultural style, the so-called Gardenesque, will here prevail. The groupings will be made up of the most desirable trees and ornamental shrubbery, and are designed to be arranged to display the most pleasing outlines and effects.

The embankment of the railroad is calculated to be summarily planted out of sight, masked by groups, allowing the swiftly-passing traveler only occasional glimpses into the interior of the Park. The shady recesses formed by the river bluff having a secluded northern aspect, are admirably adapted to the growth of many of the rarer evergreens, ferns and alpine plants, which, in dry and sunburnt locations, are entirely out of question; and many pretty little scenes can here be formed, attractive to the thoughtful wanderer, and highly interesting to the connoisseur in Botany and Arboriculture.





The rich alluvial soils of the river valley are peculiarly adapted for many of the most desirable trees, flourishing but seldom in this locality. The Linden, the Flowering Horse Chestnut, the Mountain Ash, the Norway Maple, and many others, can here be grown to perfection.

The wide-spreading lawns of the valley will be but very sparingly interspersed with trees.

The projected cascade is designed to be the great point of attraction to the lover of the romantic and picturesque. It will form a deep recess in the bluff, and will be wrapped in a rocky and mountainous character all around. It is sincerely hoped that your Honorable Board will endow this project with a fund sufficiently liberal for its full realization, remembering that true relaxation to the town-ridden and busy mind, is only found in the embrace of nature and her handiwork. The people of St. Louis will not seek the shades of a distant park to admire cut stone, French roofs and oddly painted summer houses, but to enjoy that which the city cannot offer.

The rustic arbor, the over-hanging rock, and the dashing waterfall, can boast of hosts of friends at any time, and funds expended in their creation is always money well applied.

#### ATTRACTIONS.

While engaged in the improvement of Lafayette Park, I have often had an opportunity to study the sources from which different visitors derive amusement best suited to their mind. Taking, as an example, a group of flowers and a group of rock work. The bed of flowers, however showy, may be seen passed by, almost unnoticed, by a party of elegant ladies, whose admiration may be bestowed upon the group of rocks, covered carelessly by vines and blades of grass. A little family group of unpretending people, happening along, may be seen passing the rocks as beneath their notice, and hastening to surround the flower-bed, in full triumph of joy.

Places of public recreation and amusement, to fulfill their true mission, must offer enjoyment to all classes of society. The proper choice of a reasonable variety of objects, to attain this end, is therefore a highly important consideration in the planning of a park, paid for

and supported by the populace at large. The oft-repeated objection, that Forest Park is designed for the rich who can afford to ride in carriages, can only be answered and disproved by furnishing attractions to all who seek a reasonable share of recreation.

This subject, in connection with public parks, is attracting more attention at the present moment, than during the time when the first parks of the Eastern cities were established.

The plan of Forest Park embraces several suggestions of objects of special interest to all classes of the public.

Mention has been made of a Grand Conservatory, which might be erected on the eastern slope of the floral promenade—a location remarkably well protected from the west and north. A structure for this purpose might be designed, to consist of two divisions, the tropical and the temperate; the one the home of the Palm, the other the region of the Camelia Azalea and Accacia. The interior would contain no stage, nor benches, no tubs or flower pots, but would be a natural scenery of rocks, and ferns, and mosses, from among which would spring forth a rare collection of exotics, extending wide their palmy leaves, or bending under a load of blossoms.

A spacious gallery, capable of holding large numbers of people, should surround the entire scene, making the conservatory, at the same time, a sociable public hall, the glory of the Park in winter. The columns of the gallery might be ornamented with a variety of beautiful cages, containing a chorus of feathered songsters, as well as birds of brilliant plumage.

Imagination might as well go one step farther, and design, in the midst of this floral array, a noble statue, erected to the memory of *that* generous citizen of St. Louis, who, from the surplus of his wealth, has erected this exquisite temple of enjoyment to his fellow citizens, and to his and their posterity. This dream of imagination has its parallel of reality in our sister city of Cincinnati, which is graced by the finest fountain in the land, the gift of two of her generous inhabitants. Shall wealth be ever more generous and philanthropic on the banks of the Ohio, than on those of the Mississippi, the greatest of all rivers?



## ZOOLOGICAL COLLECTIONS

of animals, both from this country and from distant continents, are fast becoming the mania of our largest cities. Their introduction into the principal public parks, offering free access to all, is but a question of time. The noble example set by Central Park of New York, will be imitated in time in many cities. When under the auspices of a corporation, the entrance fee, though merely nominal, restricts their use and enjoyment to certain days and occasions, occurring but seldom and far apart; to many their philanthropic mission, as an institution of public instruction and amusement, is exchanged with the curiosity and excitement of a menagerie show.

Whatever private enterprise may do to show the elephant and tiger in this city, the "People's Park" should not therefrom be the sufferer, by lacking so conspicuous an attraction as a zoological department.

A spot reserved for an aquarium, near the contemplated conservatory, will be observed in the plan. An arched glass roof, displaying overhead the living wonders of the pool, the river and the ocean, receiving its rays of light through certain channels from above, would undoubtedly attract a crowd at any time.

The grounds west of the promenade are spacious enough to accommodate a great variety of structures, designed for the keeping of many different animals. A rich collection of American animals could readily be obtained, at very little cost, from the famous hunting grounds of this State, the Western Plains, and the Rocky Mountains. Animals of a tamer nature, the deer, the stag, the antelope, and even the buffalo, in its infancy, requiring extensive pens and roaming grounds, might be kept in the interior of the western forest.

Whatever may be done in this direction for the present time, allow me to suggest, in the name and interest of the youngsters of St. Louis, that a bear pit, of liberal dimensions, may be erected at an early day. This museum of cheap fun should be opened to the public from the very first. The combination of the richest treasures of Botany and the wonders of Zoology, would be the foundation of a museum of natural

history, which, in coming generations, might grow as rich and famous as that of Paris or other European cities.

A view to economy in construction, and to ease and simplicity in maintenance and after-keeping of the Park, has guided the compiling of the plan throughout. Strangeness of design, or oddness in shape, whether of groups of shrubbery, or of flower beds, has not been attempted. Novelties, or rather copied antiquities of this description, are often introduced, but too soon, by new incoming administrations. The present plan, formally adopted by your Honorable Board, will undoubtedly be subjected to many changes before the whole area of the Park has received its final finish. Its fundamental features, in which the present administration is most particularly interested, when once laid down and established on the ground, have the protection, at least, of the magnitude of their scale, and cannot be materially altered or undone at pleasure.

The history of many of the smaller parks of this city has been marked by a strange diversity of opinion regarding their object and necessary improvement, and has, in consequence, been a continuous series of experiments, innocent in themselves, yet expensive to the public treasury, made so by the great variety of citizens who, from time to time, have conducted improvements under authority vested in Park Commissioners. A system of unrest and constant change, generally increased by the uncertainty of the result of every municipal election, has thus controlled the Park Fund guaranteed by the city charter by this system. If introduced into the future management of Forest Park, no satisfactory results will repay the community for sums of treasure expended in its improvement. Stability of purpose should guide, above all other considerations, its destinies.

The intelligence of the people only can carry this grand project to full and speedy realization, and to this safeguard its far-reaching interests may safely be commended.

I have the honor to be, respectfully,

Your obedient servant,

M. G. KERN,

*Superintendent and Landscape Gardener.*

## APPENDIX C.



REPORT

OF THE

ENGINEER IN CHIEF.





ENGINEER'S OFFICE, FOREST PARK,  
ST. LOUIS, *January 1st, 1876.*

COL. ANDREW MCKINLEY,

*President Board of Commissioners of Forest Park:*

DEAR SIR: I beg leave to submit the following report of operations in the Engineer's Department of Forest Park, to December 31st, 1875.

#### SURVEYS.

The surveys in Forest Park were made under the direction of my predecessor, Major Julius Pitzman, and were completed towards the end of August last.

The entire area of the Park was divided into squares of one hundred feet sides, by two sets of lines; one running parallel to the northern boundary line of the Park, and the other at right angles thereto.

The points of intersection of these two sets of lines were marked by stakes.

The lines running parallel to the northern boundary line were designated by letters; the lines running at right angles to the north boundary, by figures.

The stakes at the intersection points are marked by the figure and letter of the respective intersecting lines, so that the distance of any object from any two of these stakes being measured, its precise location is at once determined, and can be transferred to the map.

After the completion of the survey corner-stones were set at the corners of the boundary lines, eight in number. These stones are three feet long and one foot square, the top being dressed to a flat pyramid, and are set two feet deep in the ground.

Stones, two and a half feet long and nine inches square, with flat tops, and grooved in the direction of the division lines and throughout the Park, at distances of one thousand feet, so that the wooden stakes

at the intersection points can readily be replaced if lost or destroyed. There are eighty-eight of these stones.

Accurate levels were taken over both sets of lines, all elevations being referred to the city directrix; and by means of these levels a map of the Park has been constructed, showing the original conformation of the ground by contour lines at vertical distances of two feet.

This map has been constructed by Mr. Theo. C. Link, who deserves great credit for the beauty and accuracy of the work. It is drawn on a scale of one hundred feet to an inch.

Besides this map, a smaller one, on a scale of four hundred feet to the inch, has been drawn by Mr. Link, showing contour lines at vertical distances of five feet. Several hundred copies of this map have been struck off by lithographic process, for the use of the Commissioners, the Superintendent, and the Engineer Department.

The area of the Park, as ascertained by Mr. Pitzman's surveys, is 1,371.94 acres. The greatest elevation (at the south-west corner of the Park) is one hundred and eighty feet, the lowest (in the bed of the River des Pères, near the south-east corner) is twenty-nine feet above the city directrix.

## ROADS.

The drives, which, according to the present plan, will be contained in the Park, have a total length of 19.66 miles.

Of foot paths, 14.43 miles are projected.

The drives and roadways in boulevards are to be from thirty to sixty feet in width.

There will be:

2.20 Miles of drives and roads in boulevards, 60 ft. wide.	
9.58 Miles of drives.....	40   “
7.88 Miles of drives.....	30   “

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19.66 Miles.

Of footpaths, there are designed :

2.82 Miles.....	30 ft. wide.
7.31 Miles.....	20   “
4.30 Miles.....	15   “

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14.43 Miles.

Of the 19.66 miles of drives, 3.95 miles are now fully graded, 8.21 miles are partially graded, and 7.50 miles are proposed and partly located on the ground.

No footpaths have as yet been graded or improved.

The roads, which, by order of your Honorable Board, are to be provided with metal, have a total length of 3.93 miles, and form a circuit through the Park, connected with the north-east and south-east entrances. Of these 3.93 miles of drives,

0.20 Miles are.....	60 ft. wide.
3.40 Miles are.....	40   “
0.33 Miles are.....	30   “

#### GRADING.

All grading of drives, with the exception of the boulevard along the eastern boundary line of the Park, has been done by the Park force. The approximate cost of this part of the work has been \$31,500.00, and the approximate number of cubic yards of earth moved 105,000 cubic yards, as near as can be ascertained from the data on hand.

The grading of the boulevard along the east boundary line, was by contract let to the lowest bidders, Jerry Fruin & Co., at 20½ cents per cubic yard, including hauling. The total quantity to be excavated and hauled into embankment, is sixty thousand cubic yards. The average haul is one thousand four hundred feet. Forty-seven thousand cubic yards have been excavated to date.

#### GUTTERS.

On all roads that are to be metaled, gutters will be constructed, except where the drives are carried on embankment. The gutters

are two feet wide, with a dish of three inches in the center. The stones used for guttering, are from two to three inches wide and from seven to ten inches in depth.

The construction of the gutters was given out in contract to Ed. Burgess & Co., at \$11.80 per square of one hundred feet. The total quantity required on the 3.93 miles of drives, will be four hundred and ninety-four squares, including the two hundred and six squares completed.

### INLETS.

Inlets are placed on the line of the gutters at distances varying according to local conditions, from one hundred to three hundred feet. Those proposed to be built on the 3.93 miles of metaled drives, number one hundred and fifty-seven, and there are thirteen on other roads.

These inlets are built of brick laid in cement mortar. They are square, 14" x 14" in the clear on top, and their foundations consist of large flat stones. They are provided with an iron border frame and grating on top.

Seventy-five inlets have been built to date; thirty-three of them by day labor, at a cost of \$14.00 per piece, and the remaining forty-two under contract with W. J. Hegel, at a cost of \$492.10, or an average of \$11.71 for each inlet.

The cast iron frames and gratings were furnished by Collins & Holliday, at 3 cents per pound. One hundred and thirty-seven have been delivered by them to date, at a total cost of \$293.76.

### DRAINAGE OF ROADS.

It has been observed, as a rule, to arrange the inlets and drains so as to carry the water to the nearest ravine or water-course by the shortest possible route. As in many cases it would have been too expensive to lay pipes from each inlet to the nearest natural water-course, drain-pipes are laid under the gutters (three feet under ground), which connect the inlets; and at proper points the water from the lowest inlet is carried off by drain-pipes leading to the river or other

natural water-course. Besides the drain-pipes for those drives provided with gutters, a large number of pipes must necessarily be laid on the roads partially graded.

The following table shows the total length and size of vitrified clay pipe for drainage of drives, laid and remaining on hand to date :

SIZE.	LAID.	ON HAND.
24 inches.....	466 feet.	.....
18 inches.....	888 feet.	144 feet.
15 inches.....	381 feet.	20 feet.
12 inches.....	1,420 feet.	40 feet.
10 inches.....	897 feet.	556 feet.
9 inches.....	1,552 feet.	230 feet.
8 inches.....	1,814 feet.	398 feet.
6 inches.....	1,713 feet.	372 feet.
4 inches.....	500 feet.	.....
	<u>9,631 feet.</u>	<u>2,260 feet.</u>

One hundred and ninety-five linear feet of eighteen inch cement pipe have been used for the same purpose.

The total cost of these drain pipes, to date, is \$3,819.42, and the pipes still required will cost \$1,331.25.

The pipes were laid by the Park force, as this seemed to insure more perfect work. The laying of same, and the ramming of soil around and over them, costs about six cents per linear foot.

#### TRENCHES.

The digging of trenches was heretofore done under contract by Claus Vieths. Up to date 16,040 linear feet of trenches have been excavated, at a cost of \$493.67, and 19,660 linear feet still remain to be done.

As the use of sand for the construction of gutters would have been very expensive, it was concluded to use in its place the refuse from the

old coal mines, abundantly found in the Park grounds, and which also serves the purpose of preventing any vegetation springing up in the gutters.

The loading, hauling and filling in of this material, was given out in contract to Claus Vieths, at ninety-four cents per cubic yard, and has cost, up to date, \$3,777.33. The balance of this material necessary to complete all the guttering, will be handled by the Park force, and is estimated to cost about \$2,500.

#### MODE OF CONSTRUCTING ROADS.

The material used for the construction of the metaled drives consists:

- I. Of a layer of rip-rap (five to six inches in diameter).
- II. Of the refuse from the coal mines, in sufficient quantity to fill the interstices between rip-rap.
- III. Of a layer of Macadam, 4 inches in height at the gutters, and in the center—
 

8 inches high on 60 feet roads,
6    “        “        “    40   “        “    and
5    “        “        “    30   “        “
- IV. Of a layer of gravel, extending the whole width of the road, 2 inches high.

The rip-rap is placed by hand—this work being done by the Park force, at a cost of about twenty-five cents per square of one hundred cubic feet. The refuse from coal mines is then spread, and is followed by the Macadam. After the latter has been spread the road is rolled, which operation is repeated after the gravel has been placed on the road.

The contract for furnishing rip-rap and Macadam has been awarded to Chas. Slattery, at \$3.30 per square (one hundred cubic feet) for rip-rap, and \$4.30 per square for Macadam.



Up to January 1st, 1876, he has delivered—

375 squares of rip-rap, and

220     "     "     Macadam, at a total cost of \$2,182.45.

At a recent meeting, the Board of Commissioners has consented to increase the prices of Mr. Slattery's contract, from this date, to \$3.70 per square for rip-rap, and \$4.90 per square for Macadam.

The total quantity of rip-rap required on the

0.20 miles of 60 feet road.....=	246 squares.
3.40   "   " 40   "   " .....=	26,92   "
0.33   "   " 30   "   " .....=	191   "
<hr/>	
Total.....	3,029 squares.

The total quantity of Macadam required on the

0.20 miles of 60 feet road.....=	737 squares.
3.40   "   " 40   "   " .....=	2,513   "
0.33   "   " 30   "   " .....=	152   "
<hr/>	
Total.....	3,402 squares.

The quantity of gravel required on the

0.20 miles of 60 feet road.....=	97 squares.
3.40   "   " 40   "   " .....=	1,079   "
0.33   "   " 30   "   " .....=	76   "
<hr/>	
Total.....	1,252 squares.

There are now on hand in the Park one thousand three hundred and ninety-nine tons (about two hundred and thirty-three squares), of Paducah gravel, costing \$3,223.90 on the levee.

Contracts have been entered into with Tim Moraghan and the Manchester Gravel Company for fifty squares each of Glencoe gravel at \$9 per square, and with C. Morschel for one hundred squares of Meramec gravel at \$8.35 per square, delivered at railroad depot at Taylorwick.

No gravel has as yet been delivered under these contracts as, owing to the slow delivery of other road metal, we are not prepared to receive it.

The total cost of the 3.93 miles of drives, exclusive of grading, will be as follows:

I.	494 squares of guttering.....@	\$11.80.....	\$ 5,829.20
II.	33 brick inlets.....	14.00.....	462.00
	124 " " .....	11.71.....	1,451.99
III.	15,300 lbs. iron castings.....	3c.....	459.00
IV.	Drain-pipes.....		5,150.67
V.	Laying of same, 11,891 linear feet.....@	6c.....	713.46
VI.	Trenching.....		1,693.67
VII.	Hauling of coal refuse for trenches.....		6,277.33
VIII.	Ramming of same.....		400.00
IX.	3029 squares of rip-rap.....		12,018.50
X.	Setting 3029 squares of rip-rap.....@	25c.....	757.25
XI.	Hauling coal refuse over rip-rap. ....		2,200.00
XII.	3402 squares of Macadam.....		17,409.80
XIII.	Spreading 3402 squares of Macadam.....		340.20
XIV.	233 squares of Paducah gravel.....		3,223.90
	Hauling same from levee, 1399 tons.....@	85c.....	1,189.15
	Distributing same in Park, 773 cubic yards, "	30c.....	231.90
XV.	100 squares of Meramec gravel.....		835.00
	100 " " Glencoe gravel.....		900.00
	819 " " gravel (yet needed).....@	\$9.00.....	7,371.00
XVI.	Hauling 1019 squares of gravel from R. R. depot.....	" 1.65.....	1,681.35
XVII.	Rolling of roads.....		2,610.00
Total.....			\$73,205.37

The total cost of work done on these drives to date (exclusive of grading) amounts to—

\$19,529.68  
 Leaving 53,675.69 yet to be expended.  


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 \$73,205.37

#### GENERAL DRAINAGE.

The general drainage of Forest Park is not a very difficult problem, as the ground is broken by numerous ravines emptying into the River des Pères; and it is only on some of the lawns in the northern part of the Park that sub-drainage is required.

The following table shows the dimensions and total length of drain-pipe received and laid for this purpose :

## CEMENT PIPE.

DIMENSIONS.	RECEIVED.	LAID IN LAWNS.	ON HAND.
18 inches.....	1,104 lin. ft.	909 lin. ft.	.....
15 inches.....	547 lin. ft.	537 lin. ft.	10 lin. ft.
12 inches.....	915 lin. ft.	915 lin. ft.	...
9 inches.....	747 lin. ft.	747 lin. ft.	.....
6 inches... ..	1,937 lin. ft.	1,367 lin. ft.	570 lin. ft.
4 inches.....	575 lin. ft.	153 lin. ft.	422 lin. ft.
		4,718 lin. ft.	

At a total cost of \$1,245.33.

Of clay pipes there were laid in lawns and between lakes :

265 linear feet, 15 inches diameter, @ \$1.00.....	\$265 00
1,160 " 12 " " @ 75c.....	870 00
147 " 10 " " @ 60c.....	88 20
200 " 9 " " @ 50c.....	100 00
274 " 8 " " @ 40c.....	109 60
163 " 6 " " @ 30c.....	48 90
2,209 linear feet.	\$1,481 70
Less 40 per cent,.....	592 68
Net cost.....	\$889 02

## SEWER.

Near the north-east corner of the Park a brick sewer has been constructed six hundred and forty-five and a half feet in length and three feet in diameter.

One hundred linear feet of this sewer were constructed by the Park force; the remainder under contract by W. J. Hegel, at \$12.35 per cubic yard.

The cost of it is as follows:

100	linear feet constructed by day labor.....	\$ 432.50
545.5	“ “ “ under contract....	2,203.61
Total.....		<u>\$2,636.11</u>

Of this amount \$359.88 were refunded to the Park treasury by the St. Louis, Kansas City & Northern Railroad Company, being the cost of that portion of the sewer immediately under the railroad embankment and which the railroad company would have had to build for their own use.

If this sewer is to be continued to the northern boundary line of the Park, it will require three hundred additional feet at a cost of \$1,235.

#### BRIDGES AND CULVERTS.

There have been constructed to date eight road bridges, and two more are in course of erection. Also, three smaller bridges for pedestrian paths.

In two places roads are carried across water courses by brick arches of seven and twenty feet span respectively.

All the bridges are built of timber.

The bridges built before September, 1875 (five in number), have timber foundations; those built since then, are provided with stone abutments and piers.

The following tables show dimensions, cost, etc., of the several bridges:

## BRIDGES WITH TIMBER FOUNDATIONS.

No. of Bridge	LOCATION.	DIMENSIONS.			COST OF		
		Number and Length of Spans.	Total Length.	Width of Roadway.	Material.	Work.	Total.
4.	Over Rives des Peres, near Circular Pond.....	4 Spans..... 20 feet. 20 feet. 28 feet. 20 feet.	89' 7"	30 feet.	\$650 00	\$650 00	\$1,300 00
5.	Over Rives des Peres, opposite Musie Pavilion.....	3 Spans..... 50 feet 25 feet. 25 feet.	100'	40 feet.	975 00	850 00	1,825 00
6.	Over Ravine, near No. 5.....	3 Spans..... 30 feet. 20 feet. 20 feet.	72' 6"	40 feet.	950 00	1,250 00	2,200 00
9.	Over Ravine, on road from Union Av. to Cottage..	3 Spans..... 28 feet. 20 feet. 20 feet.	68' 6"	20 feet.	429 00	550 00	979 00
10.	Over small run, west of Bridge No. 6.....	1 Span..... 20 feet.	20' 6"	19 feet.	150 00	180 00	330 00
Total.....							\$5,034 00





These bridges are all completed with the exception of Nos. 7 and 8.

For No. 7, the masonry is finished and the timber on hand. On No. 8, no work has been done, but the timber is on the ground.

The amount paid out to date is \$19,120.88, and the work still unfinished and to be paid for on account of these bridges, amounts to \$4,501.

## DESCRIPTION OF BRIDGES.

### A. BRIDGES WITH TIMBER FOUNDATIONS.

These bridges consist of three or four bents of timber resting on heavy sills imbedded in the ground. The roadway which generally has a heavy camber, is carried by stringers which are formed by joists, framed and bolted together. The floor consists of two-inch plank.

The railing of these bridges is of rustic design.

On bridge No. 5, the stringers of the center span (fifty feet clear) are trussed.

On bridge 6, which carries the road over a ravine with steep sides, Mr. Kern had a rustic archway constructed under the center span which, in hot weather, will form a cool retreat. The bottom of the ravine will be paved and provided with seats. On top of this bridge a light rustic house, with thatched roof, has been erected.

### B. BRIDGES WITH STONE FOUNDATIONS.

The masonry of abutments and piers is being constructed under contract by Claus Vieths at \$5.74 per cubic yard. It consists of broken range rubble masonry, laid in cement mortar. There are to each bridge, two abutments extending the whole width of the roadway, and two lines of small piers, the tops of which are about two feet above the surface of the water and on which the wooden piers rest.

On bridges Nos. 7 and 8, the abutments are provided with short wing walls and buttresses to resist the thrust of the superstructure.

Superstructure of bridge No. 1, consists of three lines of Howe trusses three feet high. The railing of this bridge, which corresponds with the design of the trusses, consists of bases with moulded caps, moulded handrail, and light chamfered braces. All woodwork of the railing is planed.

Bridge No. 2 is constructed on a system similar to that of the bridges of the first class. Curved brackets and a handsome rustic railing serve to relieve the otherwise plain appearance of the structure.

On bridge No. 3, piers and superstructure are formed of heavy, round pine timbers, with the bark left on. The railing is of rustic design.

The superstructure of Nos. 7 and 8, consists of trussed arches.

No. 7 is designed in rustic style—all timber being framed so as to leave the exposed faces round, and with the bark on. No. 8 is built of dressed timber. The railings of these bridges will correspond with the character of the superstructure.

The designs for the second class of bridges, and for the ornamental railings, were made by Mr. C. Gayler.

The timberwork of all bridges, with the exception of Nos. 7 and 8, is completed and was framed and erected under the superintendence of Herm. Schmidt, the boss carpenter.

The framing and erecting of Nos. 7 and 8, which will be commenced within a few days, has been given out in contract to the same gentleman.

### C. PEDESTRIAN BRIDGES.

The four foot bridges, of small dimensions and simple design, were also built by Mr. Schmidt, and cost in the aggregate (for timber and work) \$1000.

To carry out the system of drives and walks, as adopted and laid down on the General Plan, two more bridges over the River des Pères and a number of small foot bridges, will have to be built; but neither their location nor the plans have as yet been finally settled upon.

### DESCRIPTION OF CULVERTS.

The smaller one of these culverts consists of two abutments of rubble masonry and a semi-circular brick arch of seven feet span with cut ring stones on each end face. Its total length is forty-five feet. It was built under contract by Jos. Haberstroh, at a cost of \$566.66, inclusive of paving.

The large culvert is of the same general design, but has a span of twenty feet. The arch consists of four rings of brick, and has ring stones at each end. Its total length is forty-five feet. Up to date the two abutment walls have been finished. This culvert is also being built by Jos. Haberstroh, and its total cost will be about \$1,900.

The dimensions of this culvert are much larger than would be required for the purpose of carrying off the water, but like the arch under bridge No. 6, it is to serve as a shady retreat for pedestrians, and as a passage for a footpath which winds along the edge of the ravine.

### RAILROAD.

The St. Louis, Kansas City & Northern Railroad passes through the north-eastern corner of the Park in a total length of 3,880 feet; and to provide for the safe passage of vehicles and pedestrians across this line, several structures had to be designed. They consist of a tunnel under the East Boulevard and Barnes Avenue, a viaduct over the main entrance road, opposite Lindell Boulevard, and two passage ways for pedestrians.

### TUNNEL.

The tunnel is designed for double track. It is to consist of two stone abutments, a center wall of stone, and two brick arches. The clear span of each arch at the spring will be fourteen feet six inches; the clear height between extrados and top of rail will be sixteen feet six inches.

The total length of the tunnel will be three hundred and fifty-nine linear feet. Of these, one hundred and fifty-three and one-half linear feet are to be constructed and paid for by the St. Louis, Kansas City & Northern Railroad Company, and the remaining two hundred and five and one-half linear feet by the Park.

The cost of the tunnel, which is to be built under contract by Claus Vieths, will be about \$92.00 per linear foot. The total cost of that portion of the tunnel which is to be constructed at the expense of the Park Fund, inclusive of wing walls, will be \$22,500.

#### VIADUCT.

The viaduct which carries the railroad over the main drive entering the Park at the north-east corner, and which is now in course of construction, will have a span of forty-one feet, and a clear height above the road of nineteen feet six inches. It consists of two stone abutments with wing walls, at right angles to the road, and an iron-plate girder superstructure.

The abutments and wing walls are built of limestone, except the buttresses at the corners of the two faces, which are of Warrensburg sandstone. The three base courses above the ground are dressed with rockface, the remainder of exposed limestone masonry consists of pointed range work, with draft around edges. The sandstones are fine dressed, with sunk panels, rosettes, and moulded coping.

The superstructure is built for the accommodation of two tracks, and consists of three plate girders, with iron crossbeams and stringers. The outside girders will be ornamented with rosettes and brackets, and the coping of the buttresses is continued over the girders in galvanized iron.

A plain limestone balustrade on top of the wing walls, a sandstone balustrade, with base, moulded cap, and sunk panelwork over the buttresses, and a richly ornamented cast-iron railing on top of the superstructure, will serve to give a finished appearance to this viaduct.

The design for this viaduct was prepared by Chas. Pfeifer, Civil Engineer.

The contract for its construction was awarded to Shickle, Harrison & Co., for the sum of \$16,515. The cost of this work will be increased some eight hundred dollars by the extra cost of foundations which had to be carried lower than originally designed, on account of the greater depth of vegetable mould disclosed during excavation.

The masonry of the eastern abutment, with its two wing walls, is completed, and the footing courses of the western abutment are laid. The iron work is nearly all ready for erection in the shops of the contractors.

#### PASSAGE WAYS.

The passage way for the accommodation of pedestrians entering the Park from Lindell Boulevard, Baker Avenue, and Forest Park Boulevard, has a span of ten feet, a clear height in the center of fifteen feet, and a length of thirty-three feet. It consists of two abutment walls, with wing walls at right angles, in broken range work, and is arched over with brick. The face of the abutment walls and arches, and the moulded coping, are cut stone. This passage way is completed, and was built under contract by Claus Vieths, at a total cost of \$5,000.

The other passage way under the railroad is to accommodate the pedestrians arriving on the Branch of the West End Narrow Gauge Railroad now in course of construction, which will have its terminus on the northern Boulevard about one-fourth of a mile west of the Lindell Boulevard entrance.

It has eight feet span, a clear height above footpath of eleven feet six inches, and a total length of thirty-nine feet. The wing walls are parallel to the axis of the arch.

The contract for this passage way has been given to James Dunne, and its total cost is estimated at about \$2,550. Work on it is to be commenced at once, and the whole will be finished before the middle of February, 1876—\$1,200 of its cost are to be paid for by the St. Louis, Kansas City & Northern Railroad Company.

## L A K E S .

The lakes and pools which are laid down on the plan, are eleven in number, and cover a total area of 42.26 acres, viz:

No. 1.	Circular Pond near Viaduct.....	1.21 Acres.
" 2.	Sylvan Lake east of Union Avenue.....	3.14 "
" 3.	Pool west of Union Avenue.....	1.23 "
" 4.	Lake near south-east corner.....	7.33 "
" 5.	The Lake south of Hippodrome.....	26.20 "
" 6 to 11.	Six small ponds in western portion of Park.....	3.15 "
		<hr/> 42.26 Acres.

Nos. 1, 2 and 3 are already graded. No. 5 has been laid out and carefully estimated. The locations of the other lakes and ponds have not been finally determined upon or adopted by your Honorable Board.

The work on lakes has heretofore been done by the Park force. The earthwork of the large lake (No. 5) will probably be done under contract.

The cost of Nos. 1, 2 and 3 can only be approximately arrived at, and is estimated at \$1,000, \$3,000 and \$7,000 respectively.

The depth of water is to be five feet.

No. 1 is to be fed by the water which the three feet sewer and a large drain-pipe, leading into the sewer from the east side of the eastern Boulevard (near Baker Avenue) furnishes. A movable weir has been built in the three feet sewer, west of the railroad, so that the water may be used for either feeding the circular pond or allowed to escape into the river.

The circular pond will also receive the water furnished by a fountain which is to be placed in its center, and which will be supplied with spring water by a steam pump.

Pond No. 1 is connected with Sylvan Lake by a large drainpipe, by which the latter will receive the surplus water of the other. Sylvan Lake is to be provided with an overfall into the river, and



from both pond and lake, drainpipes, with valves, are to be laid so that the water can at any time be drawn off altogether, for cleaning or other purposes.

The pool north of Union Avenue will be fed by a long sub-drain, with several side drains, which come from the flat meadows south of the Cottage.

The large Lake (No. 5) will, as now laid out, require the excavation of 160,000 cubic yards of material, which will be used for the construction of the drive between the lake and the river, and for shaping the grounds north of the lake. Estimating the cost of excavation at twenty cents per cubic yard, inclusive of haul, the total cost will be \$33,000, of which sum about \$25,000 are chargeable to the construction of the lake, and \$8,000 to the grading of roads and shaping of grounds.

The minimum depth of this lake will be five feet, its surface of water being at fifty-five feet above city directrix.

In times of high water, this lake may be filled from the river, and a large quantity of water can undoubtedly be obtained by sub-draining the grounds of the north-west corner of the Park.

The water which can be obtained from the above-mentioned sources will, however, be insufficient for the large quantity needed to replace the water lost by evaporation and leakage, for sprinkling roads, for drinking fountains, houses, stables, etc., etc., and some other source of supply will have to be sought for. The investigations in this direction have, however, not been carried far enough to allow a definite plan to be submitted for adoption.

## RIVER.

The River des Pères, which traverses the Park almost diagonally, from the north-west corner to the south-east corner, has a total length within the Park limits, of about four miles, and in this distance has a fall of 0.1 foot per 100 feet, measured during high water.

During the greatest flood observed last summer, its depth was about fourteen feet, while during some months in the year hardly any flowing water is found in the river.

As the high water overflowed a considerable area of the Park, all the drives and adjoining grounds were raised to at least two feet above high water. To reduce the line of inundation, the shores of the river banks have, in many places, been sloped, the driftwood and sunken logs removed, and in three places the course of the river has been changed by cut-offs through some of the narrow necks.

To prevent the driftwood from hereafter lodging in the bed of the river, it is intended to build an open weir at a point near the northern boundary line of the Park where the river enters. No definite plans for this work have, however, been perfected.

### E X P E N S E S .

#### F O R   C O N S T R U C T I O N .

The following table gives a summary of the cost of work done, and remaining to be done, in the Engineer's Department of Forest Park, to carry out the improvements which have, up to date, been authorized by your Honorable Board, viz.:

DESIGNATION OF IMPROVEMENTS.	Total of Estimated Cost.	Paid on account to Jan. 1, 1876.	Remains to be Expended.
Grading of drives and shaping of ground.....	\$67,650 00	\$41,043 00	\$26,607 00
Metalling 3.93 miles of drives.....	73,205 37	19,529 68	53,675 69
General drainage.....	3,685 69	4,820 69	3,865 00
Bridges.....	33,621 88	19,120 88	14,501 00
Culverts.....	2,466 66	1,554 22	912 44
Iron Viaduct. ....	17,315 00	9,269 30	8,045 70
Tunnel.....	22,500 00		22,500 00
Passage ways for pedestrians .....	6,350 00	5,000 00	1,350 00
Lakes .....	41,400 00	11,000 00	30,400 00
TOTALS.....	\$273,194 60	\$111,337 77	\$161,856 83

The cost of work now under contract is shown by the following statement :

Name of Contractor.	Description of Work.	Total of Estimated Cost.	Amount of Work done to date.	Remain to be done and paid for.
J. Fruin & Co.....	Grading Boulevard..	\$12,150 00	\$9,543 22	\$2,606 78
Ed. Burgess & Co.....	Paving Gutters.....	5,829 00	2,577 83	3,251 17
W. J. Hegel.....	Brick Inlets.....	1,604 27	492 10	1,112 17
W. J. Hegel.....	Brick Sewer.....	3,438 61	2,203 61	1,235 00
Jos. Haberstroh.....	20 feet Culvert.....	1,900 00	987 56	912 44
Shickle, Harrison & Co....	Iron Viaduct.....	17,315 00	9,269 30	8,045 70
Jas. Dunne.....	Passage Way.....	2,550 00	.....	2,550 00
Tim Moraghan.....	Gravel.....	450 00	.....	450 00
C. Morschel.....	Gravel.....	835 00	.....	835 00
Manchester Gravel Co.....	Gravel.....	450 00	.....	450 00
Claus Vieths.....	Tunnel.....	22,500 00	.....	22,500 00
	TOTALS.....	\$69,021 88	\$25,073 62	\$43,948 26
Less am't to be refunded by St. L., K. C. & N. R. R. Co. on J. Dunne's contr.				1,200 00
				\$42,748 26

#### FOR ENGINEERING.

The force of engineers up to September 1st, was almost exclusively employed on topographical surveys. It consisted of seven parties.

The total cost of these surveys amounted to \$10,514.94.

On September 1st, the force was reduced to two parties under Mr. Matthew P. Brazill, as First Assistant and Mr. Cyrus F. Smith, as Second Assistant Engineer, and remains so to date.

Mr. Theo. C. Link is employed as Draftsman in the city office, and Mr. C. Gayler as Draftsman in the Park office. Inspectors of masonry, guttering and Macadam, and assistant draftsmen, are employed as the exigencies of the work require.

The total cost of engineering on construction, has been \$6,787.82, or about \$1,700 per month.

This amount may appear large in proportion to the cost of construction, but when the great extent of the Park grounds, the number and length of the drives and walks, the necessity of frequent changes in location and grades called for by artistic considerations, the distance of the Park from the city, the sickness prevalent among the force during the summer and fall, and the variety of structures are taken in account, the amount expended will not, I trust, be considered excessive.

The cost of engineering for each month, is shown in Table I.

Table II. exhibits the property return of the Engineer Department.

In closing this Report, I desire to express my thanks to the gentlemen above-mentioned, and to the remainder of the Engineer Corps, for the zeal and fidelity with which they have discharged their duties.

Very respectfully,

HENRY FLAD,  
Chief Engineer.

TABLE I.

STATEMENT SHOWING NUMBER OF EMPLOYEES IN THE ENGINEER DEPARTMENT, AND TIME EMPLOYED DURING EACH MONTH IN THE YEAR 1875.

	April.		May.		June.		July.		August.		Septem'r.		October.		Novem'r.		Decemb'r.		Total Days.	SALARY PER MONTH AND WAGES PER DAY.
	Employed.	Days.	Employed.	Days.	Employed.	Days.	Employed.	Days.	Employed.	Days.	Employed.	Days.	Employed.	Days.	Employed.	Days.	Employed.	Days.		
Assistant Engineers .....	7	132	7	210	6	180	5	150	3	62½	2	60	2	60	2	60	2	60	974½	\$125 00 per month.
Draftsmen.....	1	19				1 30			1	30									49	100 00 "
Draftsmen.....			1	30	1	30	1	30	1	30	2	56	3	66	2	60	2	60	362	125 00 "
Assistant Draftsmen.....											1	1	1	30	1	25	1	28	87	2 00 per day.
Assistant Draftsmen.....							1	27											27	2 50 "
Levellers.....											2	60	2	60	2	60	2	49	229	75 00 per month.
Rodmen.....											2	60	2	60	2	60	2	49	229	60 00 "
Chainmen.....											2	60	2	60	2	59	2	58	237	55 00 "
Inspectors of Masonry.....											1	30	2	36	3	70	2	60	196	100 00 "
Inspectors of Gutting.....															1	9	1	30	30	85 00 "
Inspectors of Macadan.....																	2	58	58	60 00 "
Axemen.....	1	2			2	2													4	1 50 per day.
Field hands .....	26	306	26	533½	23	473½	23	364½	10	226									1,903½	2 00 "
Axemen.....											1	30	2	37	2	60	1	30	157	50 00 per month.
	35	459	31	773½	32	685½	30	571½	15	348½	13	360	16	409	17	463	17	482	4,552	

TABLE II.  
PROPERTY RETURN OF THE ENGINEER  
DEPARTMENT.

3 Transits.	3 Spittons.
2 Levels.	1 Bucket.
4 Levelling Rods.	2 Feather Dusters.
1       "       "       (Target.)	3 Waste Baskets.
14 Flags.	1 Water Cooler.
5 Steel Tapes.	1 Washstand and Fixtures.
4 Metallic "	6 Tumblers.
15 Plumb Bobs.	1 Large Portfolio.
30 Marking Pins.	6 Paper Weights.
3 Hand Axes.	2 Pairs of Shears.
1 Hatchet.	1 Set Drawing Instruments.
1 Thermometer.	2 Sets Water Colors.
1 Fire Pot.	1 German Silver Vernier Protractor.
1 Set Branding Irons.	1 Paper Protractor.
3 Vernier Glasses.	3 Nests Color Saucers.
1 Horse.	1 Ink Slab.
2 Stoves and Fixtures.	3 Boxwood Scales.
4 Drawing Tables.	12 Brushes
2       "       Boards.	2 Erasers.
2 Chests of Drawers.	3 Plated Rulers.
3 Tables.	4 Wooden "
3 Desks.	5 Triangles.
14 Chairs.	3 T Squares.
2       "       (R revolving.)	9 Curves.
1 Stool.	2 Paper Clips.
6 Inkstands.	2 Letter Boards.
2 Lamps.	1 Paper Cutter.

# APPENDIX D.





REPORT

OF THE

CHIEF OF POLICE.



ST. LOUIS, *January 1st, 1876.*

TO THE HONORABLE ANDREW MCKINLEY,

*President of the Board of Commissioners of Forest Park.*

DEAR SIR:

Accompanying this, please find a tabular statement showing the police force employed in Forest Park during the year ending December 31st, 1875.

Also, a statement of the property received and on hand in this Department.

Very respectfully,

WILLIAM HENRY,

Chief of Police.

POLICE DEPARTMENT.  
STATEMENT SHOWING THE FORCE EMPLOYED FROM MARCH TO DECEMBER, 1875.

	SALARY PER MONTH.	March.		April.		May.		June.		July.		August.		Septem'r.		October.		Nov'ber.		Decemb'r.		Total Days.
		No. employed.	No. days.	No. employed.	No. days.	No. employed.	No. days.	No. employed.	No. days.	No. employed.	No. days.	No. employed.	No. days.	No. employed.	No. days.	No. employed.	No. days.	No. employed.	No. days.	No. employed.	No. days.	
Chief of Police.....	\$100 00	1	25	1	30	1	30	1	30	1	30	1	30	1	30	1	30	1	30	1	30	295
Mounted Police.....	75 00													6	180	6	180	6	180	4	120	660
Mounted Police.....	70 00			1	18	2	45	2	60	2	60	2	60									213
Police on foot.....	60 00			2	35	3	69	3	90	4	120	5	142	1	30	1	30	1	30			546
Totals.....		1	25	4	83	6	111	6	180	7	210	8	232	8	240	8	240	8	240	5	150	1,744

PROPERTY RETURN OF THE POLICE  
DEPARTMENT.

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12 Revolvers.

12 Leather Belts for Pistols.

12 Whistles.

12 Stars.





## APPENDIX E.



BY-LAWS

FOR THE

Government and Regulation

OF

FOREST PARK.



## BY-LAWS.

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SECTION 1. The officers of the Board of Commissioners of Forest Park, shall consist of a President, Vice-President and Secretary.

SEC. 2. The President, Vice-President and Secretary shall be elected annually by the Board of Commissioners, at their first regular meeting in February, unless otherwise provided for.

SEC. 3. Four members of said Board shall constitute a quorum.

SEC. 4. The President shall preside at all meetings of the Board, and shall decide all questions of order, subject to an appeal to the Board.

The Vice-President shall, in the absence of the President, preside.

SEC. 5. Until otherwise ordered, the regular meetings of the Board shall be held on Friday of each week, at 3:30 o'clock, P. M., at the office of the Board of Commissioners.

SEC. 6. Order of business :

- 1st. Reading of the minutes of the preceding meeting.
- 2d. Reports of committees.
- 3d. Unfinished business.
- 4th. New business.
- 5th. Adjournment.

SEC. 7. Special meetings may be called by the President, or by any two members of the Board; and when the call is made by said members it shall be made in writing, addressed to the Secretary, who shall notify each Commissioner at his place of address, and state the object of the meeting, at least *two* days before the day of said meeting for which notice is given.

SEC. 8. The Board shall fix the salary of the Secretary, whose duty it shall be to keep a correct record of each meeting of the Board; also to keep the seal of the Board; to have the custody of all communications, letters and reports; and to perform such other duties as may be required of him by the Board of Commissioners.

SEC. 9. All offices becoming vacant by death, resignation, or removal, shall be filled at the regular meeting next after the one at which said notice was given. Officers so elected shall be by ballot, and by a majority of the entire Board.

SEC. 10. There shall be a Superintendent and Landscape Gardener, whose salary shall be fixed by the Board, and whose duties shall be to superintend the Park and all labor done therein, and to carry into effect such plans and specifications as shall be submitted to and adopted by the Board of Commissioners for the ornamentation and embellishment of said Park.

SEC. 11. An Assistant Superintendent shall be elected by the Board, whose duty shall be to superintend all day or unskilled labor not contracted for, and keep the time of the same, and be responsible for all tools, implements and materials in connection with said Park; he shall submit to the Board an inventory of such property, and the condition thereof, on the first days of July and January, and shall give such security for the faithful performance of his duties as the Board may require; and he shall perform all such other duties as may be prescribed by the Superintendent, unless otherwise ordered by the Board. The compensation for services as Assistant Superintendent shall be fixed by the Board of Commissioners.

SEC. 12. There shall be a Civil and Topographical Engineer, whose salary shall be fixed by the Board of Commissioners. His duties shall be to survey and establish the grades of avenues, roads, walks, bridges, etc., as may be adopted by the Board of Commissioners.

SEC. 13. There shall be an Assistant Engineer, whose salary shall be fixed by the Board of Commissioners, and whose duties shall be prescribed by the Civil and Topographical Engineer, unless otherwise directed by the Board of Commissioners.

SEC. 14. All subordinate officers shall be subject to removal by a vote of a majority of all the members of the Board of Commissioners at any regular meeting.

SEC. 15. Every contract made for material furnished for said Park and for services, shall be in writing; and every written contract for material, labor, or service for said Park, shall contain the stipulation that no claims shall be allowed for extra work, labor or material furnished, or alterations made on account, or in connection with said Park, unless agreed upon as to the extent and price at the time of the contract therefor in writing.

SEC. 16. Contracts not required to be made in writing, and not exceeding one hundred dollars, may be made by the President, and entered upon the minutes; but every contract exceeding one hundred dollars shall be in writing, and shall be signed by the President and the seal of the Board attached, and attested by the Secretary—after being approved by the Board.

SEC. 17. There shall be a police force, to consist of a captain and as many men as may be authorized by the Board, whose salaries shall be fixed by the Board of Commissioners, whose duties it shall be to preserve order in said Park, and carry out and enforce such rules and regulations as may be directed by said Board.

SEC. 18. All trials for violations of rules and regulations for the government of said Park shall be conducted by the President, or by any Commissioner named for that purpose by the President, or by appointment by the Board of Commissioners.



SEC. 19. No person in the service of the Board shall be absent from duty unless excused by the Board, or by permission from the President.

SEC. 20. No officer or person employed by the Board shall make any purchase, give any order to incur any liability, or exercise any authority in relation to said Park, unless by order of the Board of Commissioners.

SEC. 21. All foremen, assistant foremen, and all other appointments, not heretofore provided for by these By-Laws, shall be made or confirmed by the Board of Commissioners.

SEC. 22. All bills, claims and accounts, before being submitted to the Board for approval, shall be examined and audited, and the authority for such purchases shall be certified thereon by the Secretary.

SEC. 23. The *ayes* and *noes* shall be called and recorded on all appropriations of money exceeding the sum of \$500.00, and upon all other questions, at the request of any one member of the Board of Commissioners.

SEC. 24. All reports shall be in writing, unless otherwise agreed to, and signed by a majority of the Committee to whom the matter was referred, and shall state the facts upon which the same is based, and the conclusions thereon.

SEC. 25. All propositions presented to the Board for altering in any manner the design or plan of Forest Park, or for any structure within the Park, shall be referred to a special committee, who shall report upon the same before any further action is taken by the Board of Commissioners.

SEC. 26. No By-Law shall be altered, amended, or repealed, without the report of a Committee thereon, nor without the assent

of a majority of the whole Board, nor at the same meeting at which it is proposed, unless by the unanimous consent of all the members of the Board of Commissioners.

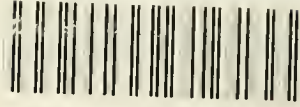
AMENDMENT TO SEC. 25, PASSED DEC. 24th, 1875.

*Resolved*, That the plans and the locations of roads, bridges, culverts and viaducts shall not, under any circumstances be altered in any manner, at any time, except by a vote at a full meeting of the Board, and then only by a vote of not less than five members at two separate subsequent meetings of the Board.





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